

Ethological studies on the effects of the birth
of a second child on mother-first child relationships

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Dedicated to my parents - Edward and Villa Mildred

Nyandiya

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Otherwise I declare that this thesis was composed by myself.

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Abstract

The effects of the birth of a second child on mother-first child relationships was studied longitudinally in a 'Main Sample' of 17 and an 'Interviews Only group' of 15 middle-class mother-child pairs. Using a number of measures that are known to elicit information on specific aspects of the mother-child relationship, and a 'multi-method' approach involving both the laboratory and home environments, the results were as follows:

1. Mothers' reports two-weeks Post-birth indicated that most children were disturbed. These disturbances included being more tearful, clingy, attention-demanding, mild regression and jealousy. At the same time, a number of children showed 'positive' interest in the baby.
2. Temperament assessment showed that at 3 months Post-birth the children were more active, more assertive and less malleable. Individually they tended towards instability in behavioural styles at this point.
3. In the "strange situation" before and after the birth, children tended to differentiate between episodes in the same way. However, after the birth the security in mother's presence and the discomfort when with the stranger were no longer apparent. Further, measures that were significantly related to age in the Pre-birth session, had these relations disrupted in the Post-birth session.
4. The amount and type of care the children received as measured by the Standard Day Interview did not change significantly from 1 month Pre- to 2 and 8 months Post-birth.
5. Mother-first child interaction at 1 month Post-birth when mother was feeding the second child compared to when the second child was asleep and out of sight showed few quantitative differences between the two situations. However, some qualitative differences as well as disruptions in age-related behaviours of mothers to children and vice-versa were found.
6. The few quantitative differences that were obtained in mother and child behaviours between 3 Pre-, 3 and 6 months Post-birth pertained more to mother than child behaviours. Their general direction was towards a reduction in 'positive' involvement at 3 Post compared to 3 Pre and 6 Post. Also at 3 Post, qualitative changes in mother-child interactions and marked disruptions in age-related behaviours of mothers to children and vice-versa were found.
7. The birth of a second child therefore disturbs the mother-first child relationship. These disturbances which follow a specifiable time course seem to maximise between 2 and 4 months Post-birth. Changes were more marked in older children, with the "least affected" age being around 30 months at the sibling birth. By 6 to 8 months Post-birth the mother-first child relationship appeared to return to the Pre-birth pattern.

Chapter 1

Introduction

Since antiquity, a majority of mothers have borne a second child. Whereas they as mothers have probably been aware that the birth of a second child affects the relationship between them and the first child; the nature of these effects, their direction or duration were, until recently, little known to psychologists.

Psychoanalysts are generally agreed on the critical importance of the relationship between a mother and her child (e.g. Bowlby, 1971). Indeed some of them have suggested that this relationship lays a basis for the child's relations to peers, other adults and eventually to society as a whole (e.g. Winnicott, 1964). If then this relationship is so basic, any circumstance that disturbs its equilibrium merits not only attention, but close consideration. The birth of a second child may be one such factor.

Common sense tells us that the relationship between the mother and first child must change with the birth of a second child. The first child, who until then has probably received his parents', and particularly his mother's total attention, suddenly has to adapt to the presence of a sibling who is not exactly a playmate initially. The mother on her part, now has to divide her time and attention between two children with very differing demands, in addition to her other roles. In the words of one mother:

" You've got the one child who is asking thousands of questions and needs to have answers to them, and the other . . . who has got to be given cuddles and attention and just physically to the nappy changes and feeds and sort of thing."

We can speculate on what these changes in the mother-first child relationship may be upon the birth of a second child, ranging from the mother being more controlling of the child to actively promoting the child to grow up and to independence, with concomitant changes in the child; or the child feeling rejected, becoming clingy and more demanding, with accompanying changes in the mother. Whatever its direction, we do expect change.

It was with this common sense notion that I set out to attempt to answer the following questions:

1. Having accepted there is change, what form(s) does this change take in the first child, the mother and in their relationship in general?
2. Does the nature of the change vary with age and hence the spacing between the first child and the second?
3. Does it vary with the temperament of the first child?
4. Is the change dependent on the nature or quality of the mother-child relationship that existed before the birth?

These questions were regarded as guidelines, not hypotheses to be tested.

1. Nature of change

Although Psychoanalytic theory had long recognised the stressful nature of the birth of a sibling on the older child (e.g. Levy, 1943) and on the previous mother-child relationship (Taylor and Kogan, 1973; Lidz, 1968), it was not until studies by Taylor and Kogan (ibid.); Legg et al (1974) and more recently Dunn and Kendrick (1980a); Dunn, Kendrick and McNamee (1981) that the evidence was established.

According to Psychoanalytic theory in general, and Lidz (1968) in particular, "the arrival of a new baby naturally provokes a small child's intense jealousy" (p. 219). Its mere physical presence is often baffling and bewildering to the older child, who may be expected and/or encouraged to show pleasure at the new arrival, as do the parents and relations. In addition, the mother has to divide her attention and affection between the two children, and therefore the older, especially the first born can no longer be the sole recipient. Thus the child experiences jealousy, resentment and possibly hatred. To resolve this conflict older siblings frequently regress or develop other symptoms as a means of coping with the stress.

The generality of this position however, appears a little simplistic. Firstly, not all children "regress or develop other symptoms" at the arrival of a sibling. Further, in emphasizing only the negative and pathological aspects the psychoanalytic viewpoint ignores the possible

positive changes that may come about with the sibling birth. Friendly and amicable relationships can and do develop between siblings. Secondly, in focussing only on the direct effects on the older child, e.g. jealousy and regression, other possibly subtle outcomes were not identified. Thirdly, the effects that were identified pertain more to the child, few were ascribed to the mother.

An investigation that has examined the effects of the birth of a sibling on the mother as well as the child, is that of Taylor and Kogan (1973). They observed seven "lower-class" mothers and their eight children (two were twins) in a playroom situation in two 42 minute sessions, before and after the birth of a second child. The first children's ages ranged from 2 years 5 months to 3 years 6 months. Each mother-child pair was observed separately. During these observations they rated each participant of the pair on dimensions of relative status, affection and involvement, at the end of each 4 seconds. Their results showed that both mothers and children expressed significantly less warmth and increased emotional neutrality or flatness after the sibling births. There was also a non-significant trend towards mother and child behaviours being less patterned to each other after the birth. Thus it was their opinion that the "study confirms the analytic view that the birth of a sibling is an important event with impact upon the mother-child relationship, at least as that is exhibited in interaction before and after the birth of a second child in lower-class families." (p. 56).

Given that this was a "small pilot study" (ibid. p. 58), their results are interesting. However, on the basis of information gathered from such a small sample, and in a laboratory context only, their conclusion appears a little generalised.

Another study that has looked at the effects of a sibling birth, is that by Legg et al (1974). Their sample consisted of 21 children whose ages ranged from 11½ months to 5 years 2 months when the sibling was born. All the children's parents had college education or higher. By interviewing the parent(s), information was obtained on each "child's reaction and response to the new sibling: in the anticipatory waiting period, at the time of birth of the sibling with the coincidental separation from mother, [and] at the time of the mother's return home with the new infant" (p. 9). Their results are generally in agreement with those of other workers (e.g. Dunn, Kendrick and McNamee, 1981), indicating that the birth of a sibling is a stressful event for the older child. Jealousy, oral regression (e.g. wanting a bottle) and regression in toilet training were all reported for a number of children in their sample. However, for none of these disturbances did the authors present the number of children showing them, nor the degree of severity. For a number of interesting propositions that they put forward, e.g. regression in toilet training being related to other factors such as maternal overprotectiveness; supportive mothers having children who

were reported as having become more grown up; and a tendency to withdraw being shown by children who had experienced extensive day care, no evidence was provided.

Perhaps the most intensive study to date, has been that carried out by Judy Dunn and her co-workers (Dunn and Kendrick, 1980a; Kendrick and Dunn, 1980; Dunn, Kendrick and McNamee, 1981). Unlike Taylor and Kogan (1973) and Legg et al (1974) whose findings were based entirely on observation in a playroom situation and parental reports respectively, they used a multi-method approach. Thus they conducted home observations, interviews and assessed the children's temperamental characteristics. Their sample consisted of 40 families who were largely working-class, and the children's ages ranged from 18 to 43 months at the birth of the sibling. The study was begun about one to three months before the birth of the second child and lasted until the baby was 14 months old.

Results based on the mothers' reports (Dunn, Kendrick and McNamee, 1981), indicate that most of the children reacted to the birth of the sibling by becoming more tearful, more clinging and more demanding. Negative behaviour towards mother "either by physical or verbal opposition or attack" (p. 3) was common, but rare towards the baby. Some children however, did show both negative imitating behaviour as well as positive interest in the baby. According to Lidz (1968), such "ambivalence is characteristic of poor as well as good relationships" (p. 221).

More than half of the children showed some regression, but only in 13 out of 40 was this marked. A little more than half of the children were also said by their mothers to have shown signs of being more 'grown up' and independent.

The general picture therefore, is that the birth of a sibling was disturbing and unsettling for the first child. This was true for children who experienced both the inevitable separation when mother went into hospital and then brought the baby home, as well as those whose mothers delivered at home.

The effects of the birth on the mother and child were also evident during the home observations (Dunn and Kendrick, 1980a). For instance, after the sibling births, mothers prohibited and controlled their children significantly more, and more time was spent in confrontation. There was an increase in verbal interactions initiated by the child, and a decrease in positive interactions initiated by the mother. Further, mother-child behaviours that were previously associated ceased to be after the birth. This lack of association after the birth, it was argued, was mainly due to marked changes in the individual behaviours of individual children.

The changes in mother-child interaction mentioned above, were based on observations until the second child was two to three weeks old. The observations by Dunn and her colleagues extend beyond this period. However, at the moment we do not know whether these changes persist or how

long for*. Neither is it known whether the patterns of interaction observed after the sibling birth revert to those more similar to the pre-sibling patterns. Needless to say a continuation of the mother-child interaction on the level that emerges after the birth of a sibling, would amount to a continued strained, difficult and generally maladaptive relationship. Experiencing the birth of a sibling is an inevitable event for most firstborns, and the continuation of a discordant relationship between them and their mothers would clearly be abnormal.

Besides the studies already mentioned, Kendrick and Dunn (1980) tested the widely held assumption that it was the mother's devoting attention to the new baby that was responsible for the lessened attention given to the first child, and hence the changes in the mother-child relationship. For this, they compared mother-child behaviours in various situations, ranging from before to after the birth. The post-birth contexts they chose were the "not-with-baby", "feed" and "hold". That is, a time when the mother was not involved with the baby, during a feed, and when she was holding or interacting with the baby. Surprisingly, their results showed that it was at the times when the mother was involved with the baby that she was more likely to be interacting with her firstborn. "It was during the period when she was not involved with the new baby that the decrease in attention to the first child was particularly marked" (p.309).

* See Chapter 10 page 347

Therefore, contrary to general belief, it was not the mother's involvement with the baby that led to decreased attention to the first child. What did? One possible explanation is that, having fed the baby and performed other routine caretaking activities, the mother still has chores like washing, ironing, preparing meals and household jobs to be done. It is quite likely therefore, that having attended to the baby (who is an additional responsibility), mothers then get on with these necessary chores rather than devote attention to the first child. This would then partly account for the lessened attention given to the first child.

A second possible explanation has to do with physical distance. Kendrick and Dunn (1980) found that the children tended to stay closer to mother when she was holding or interacting with the baby, compared to when she was not. Thus when the baby was not on the scene, and presumably the children felt more secure, they maintained a greater distance from the mother. Now for two people to interact actively, especially in the verbal mode, there has to be some degree of proximity between them. With greater distances, there is bound to be less interaction. Thus the decreased attention to the first child when the mother was not involved with the baby, could also have been due to the distance between mother and child at this time.

One study on the birth of a sibling, that by Henchie (1963) has not been included amongst the ones already

reviewed. The reasons for this omission are:

- 1) Henchie herself did not carry out the study. She studied case histories of 66 children who in 1962, were still in a longitudinal sample of 224 children started in 1949.
- 2) She mentions that the information she used was obtained from mothers "in some instances, ten or eleven months" after the birth. She of course recognises the problems of retrospective interviews, and suggests "a visit to the home by one of the investigators, a month or so before and again after the arrival of the baby, might be more useful than relying on the mother to remember the details of this period" (1963, p. 22).
- 3) She also admits ". . . it was extremely difficult to assess these relationships [between siblings] and reactions on the information available and while some of the results are interesting, I am not sure how reliable they might be" (p. 9).

For these reasons then, her study was not included. However, some of her results will be referred to in the text, particularly when they are in agreement with those of other workers. Needless to say, some of her results will have to be taken with caution, as she herself warns.

A very general summary, based on the studies already reviewed, indicates that the birth of a sibling is a stress-full event for a number of firstborns. Immediate reactions to the birth include becoming more tearful, more clingy and

more demanding. Some children regress and others become more grown up. While negative behaviour and hostility towards mother may occur, towards the baby this is rare. These effects are not only limited to the children, but are reflected in the changed nature of the relationships with their mothers. Contrary to general belief, it is not the mother's attention to the baby that gives rise to the lessened attention to the first child, it is when the mother is not involved with the baby, that the decrease in attention to the firstborn is most marked.

2. First child's age

While the evidence on the disturbing nature of a sibling birth on the first child and the mother-child relationship is clearly established, that on what age children are most affected is obscure and sometimes contradictory. This state of affairs is of course unhelpful, particularly for mothers who may want to plan to have a second baby at a time when it would be least stressful for the first child.

"The idea of a two-year gap is ingrained in us as a good thing" (Dr. Brown, quoted by Jenny Glew in the July 1981 issue of the popular magazine Woman); and indeed this appears to be the general belief (Busfield, 1974).

On a national basis, direct information on inter-birth intervals is difficult to obtain (Britton, 1979). This is because, as Britton (ibid.) points out, information from birth registration "does not include the date of birth of

the previous liveborn" (p. 11). However, on the basis of interview information collected by General Household Surveys 1974-8 and involving nearly seven thousand women, Britton shows that for the periods 1965-1969; 1970-1974 and 1975-1977, the median interval between first and second births was about 28, 30 and 32 months respectively. Most of this increase, he points out, was contributed to by women who were less than 25 years old at the birth of their first child, particularly the under 20's. The General Household Survey (GHS) had been limited to women under 45 at the time of the interview, and not at the birth of a particular child. However, whatever group was responsible for the slight increases, we can assume that for the period 1965-1977, the median interval between first and second births in England and Wales was slightly more than 2 years and less than 3. This interval is in agreement with that reported by Dunnell (1979) for the desired inter-birth interval in 50 per cent of women interviewed in the 1976 "Family Formation" survey.

Now if we turn to the question of what age children are least or most disturbed by the advent of the sibling, we find that the picture is less clear. Part of the problem centres on the general lack of direct evidence in the literature (Abramovitch, Corter and Land 1979), but in spite of this speculation abounds. Most of this speculation stems from general views regarding the advantages and disadvantages of a particular spacing (Busfield, 1974).

In fact it is arguable whether there ever will be 'hard evidence' on the ideal spacing - for two reasons. Firstly, the kind of disturbance an individual child will show will to some extent depend on the child's age and his level of mastery. Thus, regression in toilet training by a three year old who before the birth had been completely trained, will or can be interpreted as disturbance due to the birth. A 16 month old who is still in nappies and is not trained can not show similar regression. Secondly, in evaluating any child's actions or reactions, we almost always take the child's age into account. Thus if a 16 month old drops toy cars into the baby's cot while the baby is in it, a mother is more likely to take this incident lightly, whereas a $2\frac{1}{2}$ year old 'should know better'. Therefore, in the absence of disturbance indices which can apply across age periods, finding that children less than 18 months are less disturbed (Thomas and Chess, 1977) or that those around three years show the most intense jealousy (Sewall, 1930, quoted in Henchie, 1963) does not carry much meaning. Instead of searching for the ideal spacing, it would be more useful to know exactly how different aged children do react. For instance, Dunn, Kendrick and McNamee (1981) found that the younger children in their sample tended to become more clingy after the birth. This was the only age-related reaction to the sibling birth.

3. First child's temperament

One does not have to consult the psychological literature to know that individuals differ in their reactions to stimuli or situations. With respect to children, this fact is well known to parents. Whereas one child may be described as quiet and placid, another may be described as active and energetic. It is in these behavioural styles or "temperament" (Thomas et al, 1963, 1970, 1977) that parents can see the obvious differences between their children.

Although the origins of these individual differences are little understood (Rutter 1972), proponents of temperament theory vary from those that view temperament as the outcome or interaction between the organismic characteristics and the environment (e.g. Thomas et al, 1977) to those that view inheritance or genetic mechanisms as the most important criterion (e.g. Buss and Plomin, 1975). However, the fact that even at birth, an individual is already the product of interaction between genetic make-up and the intra-uterine environment (Lidz, 1968), means that differences between individuals can never be independent of previous or present interactions between genes and environment (Dunn and Kendrick, 1980b). Thus a debate concerning genetic versus environmental contributions can only be fruitless, and is not our concern here. What is important is the significance of certain temperamental constellations in individual children, and how they relate to the birth of a sibling. Associations have been found between some temperamental

patterns and later behavioural disorders (Rutter et al, 1964; Thomas et al, 1968; Graham, Rutter and George, 1973).

To date however, there appears to have been only two studies (Thomas and Chess, 1977; Dunn, Kendrick and McNamee, 1981) that have related individual temperaments to the reactions to the birth of a sibling. Both have found definite relationships. Thomas and Chess (1977) found that children who "showed mild, positive regular responses with quick adaptability to new stimuli, such as the bath, change in sleep schedule and the introduction of new foods" (p. 87), reacted to the presence of a sibling in a similar manner. That is, they were quick to adapt and accept the presence of the sibling, and were least disturbed by the event. These were the 'Easy children'. At the other extreme, however, were the 'Difficult children'. They were "characterised by intense, negative responses to the new with slow adaptability [and] tended to show greater and more prolonged disturbances after the birth of a sibling" (p. 87). Therefore, "the initial response appeared specifically influenced by the Easy child or Difficult child temperamental pattern" (p. 87).

That children with particular temperamental constellations react differently to the sibling birth, obtains some support from Dunn, Kendrick and McNamee (1981). Their's is the second study that has related temperament to reactions to the birth of a sibling. Their results show that children who scored above the median on negative mood were

more likely to show increased withdrawal behaviour and sleeping problems after the birth. An increase in clinging was more likely to be shown by those scoring above the median on negative mood and intensity; and a positive interest in the baby less likely from those scoring above the median on the temperamental characteristic of withdrawal. Negative mood, high intensity and high withdrawal which feature in the findings of Dunn et al (ibid.), are some but not all of the dimensions which characterise the 'Difficult child' temperament of Thomas and Chess (1977). In this limited way therefore, both sets of results could be said to corroborate each other. However, the assertion by Thomas and Chess (1977) and Chess (1966), that the initial reaction to the sibling is specifically influenced by the 'Easy' or 'Difficult' temperament pattern, although plausible, needs to be taken with caution. Quick adaptability and acceptance of new foods which characterise 'easy' children cannot be equated with acceptance of a new sibling, even in the easiest of children. The arrival of a new sibling involves a permanent change in role for the older child, and a change in family structure and relationships. Further it has been shown that apart from a child's temperament, his age and the mother's state post partum also play a part in determining his reactions (Dunn et al, 1981).

4. Quality of the mother-child relationship

Apart from the two factors of age and temperament, an additional factor that may influence the first child's

reaction to the birth of a sibling, may be the nature of the relationship with his mother that existed before the birth. Further, the quality of the mother-child relationship post-birth may be determined by the quality of the relationship pre-birth. As it is, our knowledge on both these possible associations is almost non-existent.*

In everyday usage we assign quality to relationships, but its objective assessment is somewhat problematic. Ainsworth (Ainsworth and Wittig, 1969), working in the framework of 'attachment theory' (which since Bowlby's (1971) formulation has given impetus to developmental research), devised a procedure for assessing an infant's attachment to his mother. The mother and infant are introduced into an unfamiliar laboratory room, also called the "strange situation". A series of eight episodes involving the infant and his mother; infant, mother and an unfamiliar female (stranger); infant and stranger; and the infant alone are then conducted. During the procedure the infant is twice separated from his mother for brief periods (mother leaves the room), and is also twice reunited with her.

Although this procedure has been criticised for its "artificial conditions", involving "artificial comings and goings of the mother and stranger every few minutes" (Weinraub and Lewis, 1977, p. 63); it has yielded some interesting results and enabled Ainsworth to differentiate

* See Chapter 10 page 350.

between securely attached infants (Group B) and two groups (A and C) whose attachments are insecure. Classification along the security/insecurity dimension is based on behaviours in the strange situation generally, including the reaction to being left by mother, but more weight is given to the behaviours shown at reunion. Group B infants seek proximity, contact or interaction with their mothers, while groups A and C show avoidance and resistance respectively (see Ainsworth, Bell and Stayton, 1971 for details).

In so far as seeking and maintaining proximity to an attachment figure is the "predictable outcome" of attachment (Bowlby, 1971), there can be no doubt that the group B infants are attached. However, when we attempt to apply this index beyond the infancy and early childhood periods, a problem arises. Evidence shows that children older than about two years, and more so those of about three and older are less distressed than younger ones when mother leaves the room. They rarely cry (Cox and Campbell, 1968; Weinraub and Lewis, 1977) and their play is little affected (Gershaw and Schwartz, 1971). When mother returns to the room they often do not approach or seek proximity to her, although they may acknowledge her return from a distance (Maccoby and Feldman, 1972; Marvin, 1977, quoted in Maccoby, 1980). Therefore in terms of Ainsworth's classification, proximity-seeking as an index of attachment is not as applicable to older children as it is to the younger ones, on whom most of the work has been done so far.

Apart from approaching and following, both of which

can bring about proximity between an infant and its attachment object, other behaviours, e.g. crying, smiling, looking, babbling, and vocalising have also been included under the general umbrella of attachment behaviours. Individually they of course serve other functions, but in common they are thought to promote and maintain contact between infant and attachment object. Some of these behaviours e.g. looking and vocalising are thought to become more prominent and to gradually take ~~the~~ place of proximity to mother as children get older (Passman and Erk, 1978; Adams and Passman, 1979). However, no attempt has been made to analyse older children's vocalisations in terms of attachment, not even when their speech has been defined as attachment behaviour (Maccoby and Feldman, 1972). This omission to consider speech as an index of attachment, by the few investigators who have worked with older children is surprising, specifically because as children get older, their ability to interact especially in the verbal mode becomes better developed. An even stronger argument for taking speech into account, stems from the findings which have indicated that the quality of attachment is related to the kind (not the amount) of infant-mother interaction (Blehar, Lieberman and Ainsworth, 1977; Egeland and Sroufe, 1981; Stayton and Ainsworth, 1973). Therefore a study of interaction in its own right (and speech is often an integral part of interaction), should lead to an assessment of the quality of the relationship.

A similar change in orientation, involving viewing

attachment as interaction was suggested by Rosenthal (1973), but met with various criticisms. Some of these criticisms, for example by Lamb (1974) were clearly justified as they appeared to represent a misunderstanding (by Rosenthal) of the concept of attachment as put forward by Bowlby. However Lamb, while adhering to an infant's reaction to a major separation from the attachment figure as "the most reliable" criterion of attachment, dismissed Rosenthal's notion of attachment as a pattern of mother-infant interaction, "precisely because no such interaction is possible" (p. 378). But, he did not go on to consider that upon mother-infant reunion, the disturbance in attachment caused by the separation, may possibly be evident in the emergent pattern of mother-infant interaction.

Another aspect of Rosenthal's suggested change in orientation, and one on which Sroufe and Waters (1977) have expressed some reservations, is the use of conditional probabilities of the occurrences of behaviours within an interaction as a means of assessing attachment. This approach, Sroufe and Waters maintain, can not explain the stable individual patterns (not discrete behaviours) in attachment they obtained, and moreover "No such stability in the conditional probabilities within the interaction has been demonstrated" (p. 1193). However, we do not know for certain that the individual patterns in attachment that they obtained would not be reflected in individual styles of interactions, and until we do know we cannot judge whether

they will show stability or not. Our first task therefore, should be one of assessing what styles of interactions give rise to what kinds of attachments. The problem of assessing relationships has already been mentioned and one inroad may be as Hinde (1976) has suggested, looking at relationships in terms of content, quality and patterning of interactions. The content dimension (what the interactants do) is the one most mother-child studies have focussed on (Lewis and Lee-Painter, 1974), but what is now desperately needed are models to deal with the patterning or "flow" of the interaction, particularly those for diagnosing "mother-child harmony" (Brazelton, Koslowski and Main, 1974).

To overcome the problems inherent in assessing relationships and to investigate the subject of this thesis, I chose a 'package approach' involving measures that are known to elicit information on specific aspects of the mother-child relationship. Thus Ainsworth and Wittig's (1969) procedure was used to investigate attachment; an assessment of temperament based on Thomas, Chess and Birch (1968) for identifying individual behavioural styles; and the Standard Day Interview by Douglas et al (1968) to assess the amount and type of attention given to children. In addition to these measures, it was necessary to examine the mother-child relationship more directly. For this purpose mother-child interaction was observed, and to eliminate distortions due to unfamiliar laboratory settings, these observations were carried out in the homes. For all the measures just

mentioned, the focus was on change from before to after the birth of the sibling.

Further information and discussion of these measures will be found in the relevant chapters. Chapter 2 presents an overview of the methods that were used.

Note: One variable that may be thought to influence the first child's reaction to the birth of a sibling is the first child's sex. However, apart from the finding by Dunn, Kendrick and McNamee (1981) that boys more than girls were more likely to increase in withdrawal, none of the other studies earlier mentioned reported significant sex differences. As such, this variable was not discussed, nor will it be.

Chapter 2

Methodology

Apart from the problems of assessing the mother-child relationship, the basic question of how and where best to study this relationship is by no means settled. Each approach has its own advantages and disadvantages - a fact well known to investigators. Interviews and questionnaires are notorious for socially desirable responses. They involve selective recall which is in turn affected by the respondent's own emotional state, and by current events (Thomas et al, 1964). While 'hard facts', e.g. a baby's birth weight and information requiring concrete descriptions are recalled best (Haggard, Brekstad and Skard, 1960; Douglas et al, 1968), information involving interpretation and attitudes, particularly when anxiety is involved is least reliably recalled (Haggard, Brekstad and Skard, 1960). However, not only does a parent know her child better than any outsider, and is therefore a reservoir of information on a particular child, but the only way of finding out information which is not easily accessible, e.g. a child's sleeping habits or his fears, is to ask the parent. Also, if one is studying a rather large sample, interviews and questionnaires are quick to administer and can be relatively easily scored.

A common disadvantage of observations in the experimental (laboratory) and home environments is the possible distortion of behaviour due to the presence of an observer.

In both situations too, behaviour can tend towards social desirability. The experimental laboratory is an unfamiliar setting for most mothers and children, however its main advantages are that stimuli can be precisely pre-arranged (Lytton 1973) and unwanted variance can be eliminated (Hartup 1978). Observation in the home lacks standardisation, but it is the 'natural' environment for most families. Undoubtedly a common advantage of both studies done in the experimental and home environments is "the firsthand nature of the data" (Yarrow, 1963).

In the light of the weaknesses and strengths, only a few of which have been pointed out for the various methods, I chose to combine all the afore-mentioned approaches. By so doing I was interested in obtaining information on mother-child interaction directly (laboratory and home observations), and also aimed to arrive at that which was not easily accessible. I also hoped that the various approaches would corroborate each other.

A multi-method approach is not a new idea. Several workers (e.g. Campbell and Fiske, 1959; Yarrow, 1963 and Hartup, 1978) have urged for such an approach, on the basis that the different approaches are "more nearly compatible or complementary" than competitive (Klein, Jorgensen and Miller, 1978). Further, with one method, trait variance and unwanted method variance are not distinguishable (Campbell and Fiske, 1959).

Before going on to describe the actual procedures that were used, it is appropriate to say something about the

subjects first.

Subjects:

Immense difficulties, mostly of a bureaucratic nature were experienced in the attempts to obtain subjects. Finally, most of the subjects were obtained through placing an advertisement in a local paper, 'The Scotsman', and a few were obtained through word of mouth. The advertisement read:

Baby No. 2 coming?

What is the effect of a second birth on baby No. 1?
If you are interested in participating in research
on this problem please ring . . .

Mothers who responded to this advert had their names and addresses taken down, after which they were contacted by the investigator and a meeting arranged in the home. It can be seen therefore, that the sample was not random, but was made up mostly of self-selected readers of the 'Scotsman'.

On the occasion of the initial contact in the home, the investigator outlined the study and mentioned the length of time it would involve (i.e. 11 months). It was also mentioned that a tape-recorder would be used on all visits to the home. While attention was focussed on the child's possible reactions to the birth of a sibling, the mother's role in the study was not disclosed at this time. Participation of the mother was then formally requested, and all the mothers contacted in this manner agreed. Factual information on the first child, e.g. name and date of birth, the mother's expected date of delivery, the father's occupation

and both parents' nationalities were then obtained. If the mother volunteered her own occupation (when she worked) or occupational level, this was noted down, otherwise this information was obtained later on when the investigator knew the mother better. Questions to do with the parents' ages, and any other questions that might have been construed as annoying, irrelevant or embarrassing, were totally avoided at this meeting.

At the end of the meeting, a date was then set for the 'first visit' (that is 3 months Pre), if the family were eligible for the Main Sample.

The Main Sample was made up of 17 mother-child pairs of intact families, resident in or near Edinburgh. Apart from one mother who was Welsh, the rest of the parents were either (or both) English or Scottish. Their classification according to the father's occupation (Registrar General, 1970) was I for five families, II for seven families and III (non-manual) for five families. If, however, as Newson and Newson (1968) did, the mother's occupation (or occupational level) is taken into account, and the family status is upgraded where her level is higher than the father's, the classification becomes I for five families, II for ten families and III (non-manual) for two families. None of the mothers were in full-time employment when first contacted. Two worked two mornings a week each, and a third worked one afternoon a week.

Out of the 17 children there were nine boys and eight

girls. Their ages ranged from 18.25 to 50 months, with a median age of 27.75 months when the sibling was born. One family emigrated about four months after the birth of the sibling, and the study ended with 16 children, eight boys and eight girls.

Apart from the Main Sample of 17 mother-child pairs, another group of 15 mother-child pairs was recruited from the mothers who answered the advert. This is referred to as the 'Interviews Only Group'. This group's classification according to the father's occupation was I for eight families, II for four families and III (non-manual) for three families. However, if as in the Main Sample, the mother's occupation (or occupational level) is taken into account, then the family status becomes I for nine families, II for three families and III for three families.

As in the Main Sample, none of the mothers were in full-time employment. One mother worked five mornings a week, another for three mornings and a third for two evenings a week.

Initially, the group consisted of eight boys and seven girls whose ages ranged from 16.75 to 60.5 months, with a median age of 31 months at the birth of the sibling. By the end of the study however, one family had moved house and could not be contacted, and one father had been transferred to work abroad and the family had gone with him. Thus there were then seven boys and six girls.

The main distinguishing features between the two groups were that mothers in the Interviews Only group were either

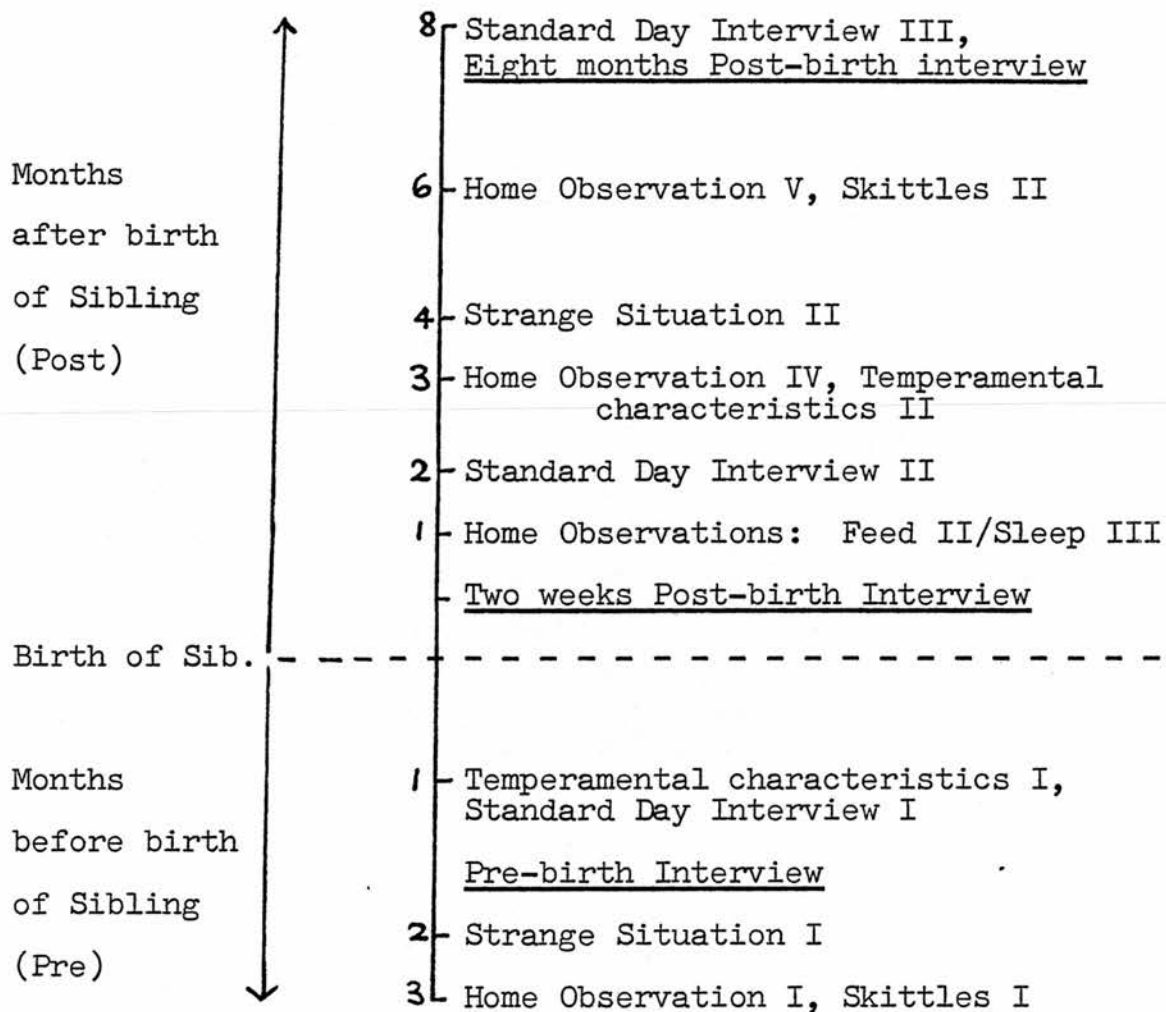
beyond the sixth month of pregnancy when first contacted, and therefore the whole study could not be done with them; or were themselves and/or their husbands not English or Scottish.

As their group name implies, only the Pre-birth, Two weeks Post-birth and Eight months Post-birth interviews were done with this group. The main reason for its inclusion was to enlarge the sample size, and further investigate the central issue of the study, that is the effect of the birth of a sibling.

(The names of all subjects and their ages at the birth of the sibling, together with the sex composition of the siblings are listed in Appendix I.)

Procedures

The study to be reported in this thesis was necessarily longitudinal since it dealt with change in the same individuals, from before to after the birth of the sibling. Table 2.1 presents the outline of the study, which spanned from 3 months before to 8 months after the birth. The decision to start at 3 months pre was arbitrary. It could have been 2 or 5 months pre, all that was needed was a baseline. Terminating the study at 8 months post however was less of an arbitrary decision. I thought most of the siblings would be crawling by that age, and although they would not yet have become active competitors, they would be starting to interfere with, for example, the first child's play. This I thought would give rise to different forms

Table 2.1Outline of Study

(Note: Home Observations I, IV and V = Unstructured observations)

of interactions between mothers, firstborns and siblings.

Interviews

Four different types of interviews were conducted with each family of the Main Sample (three with each family in the Interviews Only group). All three out of the four interviews were open-ended, and thus enabled the mothers (and/or fathers) to elaborate, disagree with each other and include information not otherwise requested.

All interviews were recorded on a portable tape-recorder and although this increased the work-load in terms of transcribing from the tapes and the subsequent analysis, the main advantage, that of allowing the flow and continuity of the discussion between the interviewer and the respondents, far outweighed the disadvantages.

Pre-birth interview

This was essentially an all-round interview with a primary focus on the child's history. Questions ranged from the child's eating and sleeping habits to his medical history; the child's social environment, e.g. contact with other children, contact with grandparents and the parents' own social contacts; to the child's 'preparation' for the birth of the sibling. Also included in this interview were questions on maternal attitudes to for example toilet training and imaginative play; parental use of punishment and the father's relationship with the child.

The interview was conducted on a weekday evening, with

both parents together. Firstly, this enabled the parents to speak more freely without the first child around, and secondly it was hoped that more accurate information would be obtained. "Mothers' interview responses represent self-descriptions by extremely ego-involved reporters" (Yarrow, 1963, p. 217).

The interview lasted for about an hour in the case of younger children for whom some of the questions did not apply (e.g. going to nursery), to about one and a half to two hours for some of the older children.

Two weeks Post-birth interview

Within two weeks of the sibling being born, the above interview was carried out with the mother in the home. It was hoped that with only a two week interval, a fair degree of accuracy and a minimum of distortion due to recall about the events surrounding the birth, would be obtained.

The interview dealt mainly with the first child's reaction to separation while the mother was in hospital, the child's immediate and other reactions to the baby and to the mother on their return, and the mother's and baby's own well-being.

Before the interview began, each mother was informed by the interviewer that if she were unable to answer a question freely, because the first child was present, she only had to hint and we would postpone the particular question(s). As it turned out, only two mothers were uneasy about answering a few questions in front of their

children. Both mothers later persuaded their children (who complied) to go and help daddy (who was home) while they answered the questions.

Eight months Post-birth interview

When the sibling was eight months old, which was also the point at which the study ended, the above interview was done with the mother. It had questions amongst others on the sibling's development up to that stage, the first child's interaction and relationship with the sibling, and the father's relationships with both children.

Standard Day Interview

Strictly speaking, this is not an interview in the same sense that the preceding ones are. Rather, it is a technique devised by Douglas et al (1968), by which one can assess the amount of attention given to young children. The interview involves asking the mother to account in detail and chronologically for the child's activities over the preceding 24 hours, together with the number and identity of the persons encountered by the child. As such, no schedule or guide is necessary. The interview was carried out on three occasions, before and after the birth, in an attempt to find out whether the amount of attention given to the first child changed after the birth.

Observations of mothers and children were done both in the experimental (laboratory) and home settings. In the laboratory, Ainsworth's and Wittig's (1969) 'strange situation'

procedure was conducted, and in the home both structured and unstructured observations were carried out.

Strange Situation

A brief account of the procedures in the 'strange situation' has already been given (see p. 17). A fuller description of the procedures that were used here is presented in Chapter 5 (p. 98-101). Also already mentioned (Chapter 1) are some of the problems relating to the concept of attachment, the method by which it is assessed and its interpretation.

One problem that has not been mentioned that is not only our concern here, but is also of a general developmental nature, is that of the 'strange situation' being recalled, particularly by older children when they are introduced into it a second time. Maccoby and Feldman (1972) also encountered this problem. It arose here because the children were exposed to the situation twice, once before and once after the birth of the sibling. However, as this problem was recognised after a number of subjects had been run, it was decided to keep the room for uniformity. Use of a different room (Maccoby and Feldman, 1972) is not a satisfactory solution. It cannot control for the child recalling the total situation (not the room) once he is in it. And if the same individual is studied in different 'strange situations', then the situations cease to be

comparable. Another aspect of the problem is controlling for the mother with an already verbal child informing the latter of the situation before-hand. Indeed, most mothers in the study done here, talked to their children about the taxi ride and the visit to Sally's (investigator's) nursery in advance. Presumably mothers could be requested not to inform the child, but would this not create unnecessary anxiety particularly in a child who is used to being told of events before-hand?

In any case, the children studied here were observed in the 'strange situation' primarily to see whether there was a change in their attachment to mother, after the birth compared to before.

Home Observations

With the exception of playing the skittles game, all home observations were unstructured; that is, the activities that individual mothers and children engaged in were not in any way directed by the observer. The only direction occurred with the "mother feeding baby with first child around" and "mother and first child together while baby asleep" conditions, and even then it was not in terms of the activities engaged in with the first child. In fact it was emphasised to the mothers that they carry on as much as possible with their normal everyday activities. Most mothers were happy to do this, and maybe get the ironing done or preparations for the next meal underway, or if they felt like it sit down and read to the child. Another point

that was stressed (and this applied to all observations), was that the mothers should try as much as possible to ignore the observer's presence, and behave naturally with their child. This is of course easier said than done, but in this connection it is worth mentioning as Lytton (1973) observed that "the young child's behaviour is almost unaffected by the observer's presence, so that naturally occurring situations will often, willy-nilly, bring out the parent's natural reactions which it is not completely in their power to suppress. This is a factor that contributes considerably to a reduction of distortion" (p. 8-9). Therefore if the mother does not behave naturally, the child almost always does.

Also I believe, that if the investigator is in the home for fairly long periods, and over an extended period of time, as was done here, the mother cannot possibly put on an act each and every time.

(Other points that are related to the observations, and the rest of the procedures in general are listed under Notes: p.40-43)

Normally, the question an investigator is interested in determines what behaviours he will pay attention to and what he will discard. When the studies on mother-child interactions to be reported in this thesis were first devised, there was little information on what mother or child behaviours would be affected by the birth of the sibling. I had intuitions on which behaviours would change, but this did not provide enough grounds for selecting

some behaviours and not others. Therefore I chose to include all behaviour and ongoing-activity between mothers and children, during the specified period of an observation. In practice, it is probably impossible for a human observer to record all behaviours occurring between a mother and her child in the free-flowing and fast-changing home environment. However, as all conversations were recorded on a portable tape-recorder, more attention could be paid to recording the concurrent non-verbal behaviours, using pre-coded categories.

Some time after the visits, the cassette tapes were transcribed verbatim, and the speech categorised according to its underlying meaning or function (e.g. Requests, Questions) in context. The non-verbal behaviours were analysed in terms of frequencies and/or durations. The verbal and non-verbal categories that were used, together with their definitions are given in Chapter 7.

Two related problems that arose during classification deserve mention. These were the often unrecognisable speech forms uttered by the younger children, and their mothers' interpretations of these utterances. Here are some examples:

1. C: (Holding up cup says) "Dododo there".
M: (Responds) "You want a little bit in there?"
2. C: (Looking at tape-recorder says) "Ha-ha make ho-ho."
M: (Responds) "No it doesn't make music."

In example (1) the mother is in fact trying to confirm that the child is making a request, whereas in (2) she appears to have understood the utterance and she is disagreeing with

it. An outsider knowing the contexts, could probably make a better guess of what the child in (1) was trying to say, compared to the child in (2). However, we cannot deny the fact that mothers rather than outsiders are generally more familiar with a particular child's form of 'language'. As Cazden says: "The most available interpretations of a child's intentions are the mother's" (1973, p. 312). If a child's utterance was totally unrecognisable, e.g. "Goita asta kala", it was classified as Exclamation; if it was semi-comprehensible or incomplete, e.g. "I want to keep te ma buy", it was classified as Verbalisation. On occasions, as in examples (1) and (2), utterances were categorised according to the mother's interpretation. This last approach however, is beset with problems (and Cazden, (ibid) points some of these out, but in addition mothers are not always successful at interpreting correctly. The following transcript in which the child kept repeating an utterance illustrates unsuccessful interpretation.

C: ". . . daiya . . . daiya . . . daiya.

M: Mii?

C: taiya.

M: Talia . . . Natalia is in her house, over the road.

C: taiya . . . taiya . . . taiya . . . taiya . . . taiya
. . . taiya.

M: What's the matter?

C: taiya, taiya . . . taiya . . . taiya.

M: That pepper will make you sneeze.

C: Uu! . . . mummy (↑)

M: Yes.

C: pepper, pepper.

M: Yes. . . have you got it all down your dress?. . .
Brush it away.

C: taiya (↑)

M: Sally, not Natalia. . ."

Note: (↑) = rising intonation

. . . = a pause

It is worth noting however, that most children rarely persisted in their attempts to be understood or have their utterances interpreted correctly. More often than not they would utter something completely different after a couple of repeats, or the mother would divert their attention onto something else. Perhaps as Ryan (1974) has suggested, "what is most important for the child is not whether she is correctly interpreted by adults, but that she is interpreted at all" (p. 205). Ryan also gives a full account of this process of interpretation, and the difficulties experienced by adults in attempting to understand the speech of young children.

Individual differences

Although it should be possible to pick out individual children whose behaviour differs markedly from that of the other children, through using the various methods already presented, it was of interest to employ a measure that was designed specifically to assess individual differences. There were two reasons for this. Firstly, Thomas and Chess

(1977) whose studies were cited earlier (see Chapter 1) are of the view (which was questioned) that the reaction of children to the birth of a sibling is heavily determined by whether the child's temperament is characterised by the 'easy' or 'difficult' pattern. Secondly, these same authors have suggested that a change in either the individual's own characteristics or the environment, both of which contribute to determine temperament or individual style, can influence the expression of temperament.

Since the birth of a sibling involves a change in the first child's environment, it was of interest to see whether the children's individual styles changed after the sibling birth. For these two reasons, an assessment of temperament developed by Sturge and based on earlier scales, e.g., Graham, Rutter and George (1973), and originally Thomas, Chess and Birch (1968), was done before and after the birth.

Control Group

It may have been noticed that the studies done here did not include a control group. In the traditional experimental sense, this would have been a sample in which no second children were born, and where the first children were matched with those of the Main Sample. This classical control group would not however overcome the main problem in the present experimental design - namely that the children themselves develop between the pre-birth and post-birth periods. In order to overcome this, data from the children themselves were used as their own control as shown in Chapters 5 and 7. Thus age trends apparent within the sample at the pre-birth period were used as baselines against which the later data were compared.

Effects of maternal separation during the confinement were not controlled for independently of effects of the birth of the sibling.

However, it seems from the work of Henchie (1963) that firstborns are equally upset by a home confinement, thus the separation effects are likely to be minimal.

Analysis

Non-parametric tests are used throughout, since the assumptions on which parametric tests are based were not met.

Because of the age range of the children studied, and the fact that the study extended for a period of 11 months, it has been necessary to show that whatever changes occurred were due more to the sibling births than to the children getting older. As such, age correlations based on Spearman's rho (2 tailed) have been calculated for all measures.

Notes

1. The children's ages at the birth of the sibling are their exact ages. In some cases however, the age given for a particular child at any other time is not necessarily the child's exact age. The reason for this is given in Note 2.
2. Most visits were done at the points at which they are scheduled in the study outline (Table 2.1). However, anyone who has worked with mothers and children knows that unforeseen circumstances (e.g., illness) and foreseen ones (e.g., family going away on holiday), inevitably occur. These make it impossible for any investigator to keep to the schedule.

When these circumstances arose therefore, the timing of the visit had to be changed. Now for about half of the subjects in the younger age group, the differences in ages between adjacent children is often very small, and in some cases is as little as a week (see Appendix 1). If then the exact age of each child at each visit was calculated, the result would be occasional shifts in their rank order by age.

Such inconsistency from one study to the next, especially where individual children were concerned, was thought would create more confusion than enlightenment. Therefore the same rank orders of the children are maintained throughout the separate studies.

3. Most visits were arranged about a month in advance, for a time that was convenient to the mother. If for any reason a mother wished to change the date, she was free to do so. In each case, visits were also arranged such that for each family, both mornings and afternoons were sampled. Visits were limited to weekdays, weekends and public holidays being excluded.

4. On no visit did recording start immediately after the investigator's arrival in the home. The first 10-15 minutes or sometimes longer were spent in enquiring after the family's well-being, asking about events or occurrences that had happened since the investigator's last visit and generally chatting to the mother and to the child. Often this happened over a cup of tea (and juice for the child) which all mothers always offered, either at the beginning or at the end of the visit.

5. Although all the mothers were aware of the topic under study, they were often not aware of the specific measurements that were being carried out, in some of the procedures. This probably lessened distortion that would have been due to their awareness.

6. Any observer by being present however, invariably affects what is observed. I sought to keep these effects to a minimum, and therefore behaved as much as possible like any other visitor into a home. In this connection, I always responded whenever a child attempted to interact, although I did not prolong the interaction if I was observing. If the mother moved, e.g. to another room, and the child stayed, then I stayed in the same room with the child. If however, both mother and child moved, and were out of sight for up to five minutes, then I went to join them. Often the mothers themselves would invite me if they were going to be out of view for any considerable time. If only the child left the room, I never followed.

7. Occasionally but not often, a visitor or tradesman would drop in. If this was during an observation then these periods were excluded from the analysis, but noted in the record.

8. All the children's names and the occasional parent's name have been changed for the sake of anonymity. However, the same name is used for the same individual throughout the text.

9. Finally, I conducted all the studies, and not only came to know all the Main Sample mothers and children well,

and to some extent the Interviews Only group too, but also established friendly relationships with all. Without exception, they accepted my presence in their homes, appeared to talk freely about their children, their feelings and occasionally their doubts; and sometimes discussed issues that were not even related to the study.

A case for the multi-dimensional approach that was adopted in this thesis has been presented. Chapters 3 to 9 present the studies that were done, the detailed procedures and the results. Also in Chapter 9, an attempt has been made to integrate all the findings on individual variations. In Chapter 10 a summary of all the results and the conclusions are presented.

Acknowledgement

I am grateful to Judy Dunn for the use of the Pre-birth, Two-weeks post- and Eight months post-birth interviews which she and Dr. Claire Sturge of Northwick Park Hospital compiled; and also for making available to me the use of the Temperament assessment developed by Dr. Sturge.

Chapter 3

First-born children's reactions to the birth of a sibling:

Mothers' reports

INTRODUCTION

In spite of the weaknesses inherent in interviews, and some of these have already been mentioned (p.23), the only way of finding out about children's reactions to the birth of a sibling over an extended period, is to ask the parent. It would be impractical to observe the child's behaviour continuously for more than a limited time, even of one day. It was thus decided to rely on the mother as informant, and the two-weeks post-birth interview was done.

The purpose of this chapter then, is to present in very general terms the reactions of the children studied here to the events surrounding the births of their siblings. In so doing, it is intended only to paint a very general picture rather than definitive statements about individuals.

METHOD

A total of 32 children from the 'main sample' and 'Interviews only group' served as subjects. The details of the samples and the reason for including the 'Interviews only group' have already been given. (See Chapter 2, p.26-28).

The two-weeks Post-birth interview is given in Appendix 3. The three questions dealing with the preparation of the first child for the birth of the second, were part of the Pre-birth interview/
Appendix 2. They were addressed to both mothers and

fathers together when the Pre-birth interview was done, which was about two months before the birth of the sibling. The rest of the questions, which make up the Two-weeks Post-birth Interview were addressed only to mothers during scheduled home visits. Both interviews were semi-formal and were recorded on a portable tape-recorder. They were later transcribed for analysis.

RESULTS

Preparation of first-born children for the birth of the sibling

As can be seen from Table 3.1, all but two children, one from each sample, had been informed beforehand of the expected birth. The two mothers who had not informed their children, Simon and Crispin, then aged 16 and 20 months respectively, however, reported that they occasionally mentioned the word "baby" in their conversations with the children or while getting things ready for the baby, although they had not specifically told the children that they were expecting. So in a way, all the children had been exposed to the idea of a new baby.

On average, mothers of children younger than about 28 months tended to wait until they were obviously and visibly pregnant (about the fifth/sixth month) before telling the child, whereas children older than 28 months were in general informed much earlier (about the second/third month of pregnancy). Presumably because children in the younger age group were not then verbally competent, and indeed almost all the mothers felt

their children were too young to understand, the mothers sought to associate a big tummy with the imminent arrival of the baby. That some of the children in this age group did not really understand was exemplified in the case of four girls who then became fascinated by other people's tummies, among them a 21 month old girl called Sarah who often said, "Mummy baby", "Daddy baby", and would occasionally lift up her own dress, look at her tummy and say, "Hello baby".

Table 3.1

Preparation of first-born children for the birth of
a sibling: Mothers' and Fathers' reports

	Main Sample	Interview Group
Informed about the birth	16	14
Not informed about the birth	1	1
<u>Special measures taken by mother</u>		
General talk about babies	8	7
Books, pictures, pointing out babies e.g. on television, prams	13	9
Child part of preparation process e.g. sorting out baby clothes	3	7
Discussed in some detail	2	2
Child interested	15	11
Child not interested	2	4

Main Sample, N = 17

Interviews only group, N = 15

As has already been mentioned, children in the older age group were in general informed early on in the mother's pregnancy, and the majority were told simply because the mothers felt they had to tell them. However, one girl, on overhearing her mother tell a friend that she was pregnant, asked what pregnant meant. She was then told. Two boys were informed in the context of stopping them from continuing to jump on their mothers' tummies, and three mothers who were suffering from morning sickness tried to reassure their daughters that they were not seriously ill and therefore informed them then. Out of the three children in the older age group who apparently noticed, one asked the mother why she was such a funny shape and the other two suddenly said, "There's a baby in your tummy", at which point all three were informed.

In telling the child, most of the mothers in both samples had simply said that they had a baby in their tummy and a few had asked the question, "Would you like a brother or a sister?"

All the mothers except one in the 'Interviews only group', Alvin's, reported having taken some step towards preparing the first child for the arrival of the baby, apart from just informing. The measures they took as well as the number of mothers taking them are shown in Table 3.1. Quite a number of the mothers in both samples mentioned that they had both talked about babies in general (e.g. having no teeth, no hair and unable to talk), and looked at pictures of babies or read books about the birth of a baby. The most mentioned was a

Ladybird book called "Talk About Baby".

Only ten children from both samples, eight girls and two boys, were reported as having been involved in the process of getting things ready for the baby, e.g. sorting out the baby's clothes and preparing the baby's room. All ten were in the older age group, and the sex difference is not significant.

About half of the children in each sample were also said to have come into contact with friends' babies which the mothers thought prepared them for what to expect.

The very small number of mothers who reported discussing the birth of the sibling in detail with their children, appears to have been due partly to the belief of most mothers in giving only limited information to do with the birth, to their children. However, if one takes into account the incidence of questions asked by twelve of the older children out of the combined total of thirty two, ranging from, "Is it going to have tea?" to "How will it come out?" to which answers were given, then the figures in Table 3.1 must be interpreted in conjunction with the answers to these questions. Perhaps the mothers thought that answering these questions did not constitute "discussing the birth in detail".

The majority of children were said to be interested in the idea of the forthcoming baby. This ranged from a sudden interest in babies, e.g. on television, to frequent mention of babies and asking lots of questions by older children. In a few cases however, some of the questions like, "Will baby take my toys?", "Will baby cry all the time?", there appears to have been an element of anxiety as well.

The six children who were said not to be interested in the idea of the baby were all boys. They were Simon and Ian the youngest and fifth youngest respectively in the main sample; and Roger, Mick, Alvin and Crispin the four youngest in the Interviews only group. Alvin, it will be recalled, is the only one whose mother had not taken any special measure in preparing him for the arrival of the baby, apart from just informing him.

The Birth

About two months after the Pre-birth Interview, upon which the preceding information was based, the siblings were born.

All the mothers delivered their babies in hospital, and, except in a few cases where the investigator was not informed in time, were all visited there.

The children and their caretakers were also visited by the investigator wherever possible, during the mother's confinement in hospital.

On the mother's return home, and within two weeks of the birth of the sibling, a second interview was carried out with her alone. This was the Two-weeks Post-birth Interview. (See Appendix 3). The questions centred on the first child's reaction to the mother's absence and to her return, the child's reactions to the baby, and the mother's and baby's well-being. The results of this interview are divided into four sections and are presented as follows:

1. Demographic data surrounding the birth of the second child.

2. Reactions to mother's absence and to her return.
 3. Reactions to the baby.
 4. Reactions to the mother caring for the baby.
1. Demographic data surrounding the birth of the second child

Almost all the children visited their mothers in hospital, and although some were said to have been reluctant to approach and had looked strangely at their mothers in their hospital beds during the initial visits, these visits were largely joyous occasions for both mothers and children.

While the mothers were in hospital, most of the children stayed in the familiar environments of their own homes, (see Table 3.2) and were looked after by people with whom they were familiar. Indeed, a number of fathers took time off work to look after their children. The few children who were looked after away from home were all, except one, either visited daily or taken home at night by their fathers. The one child, Caroline, who did not see her father at all during this time, was being looked after out of town.

Wanting the children to feel that they were bringing their own babies home, most of the children were taken along to collect mother and baby from hospital.

Table 3.2Demographic data surrounding the birth of second child

	Main Sample	Interview Group
<u>Length of mother's hospital confinement</u>		
6 days	12	11
6 days	5	4
<u>First child's visits to hospital</u>		
Daily or more	11	12
Some of the time	5	2
None	1	1
<u>Care of first child during confinement</u>		
Home - Father/Relative/Friend	11	14
Away during day - Relative/Friend and Home at night - Father	2	-
Away with relative, visited daily by Father	3	1
Away with relative, not visited by Father	1	-
<u>On Mother's return</u>		
Child went to collect mother	11	11
Child at home with relative/friend	4	3
Child away from home with relative/friend	2	1



2. Reaction to mother's absence and to her return

Asked how they thought their children took to their being away, the majority of mothers said they had taken it well. (See Table 3.3). This however would have been based on the information supplied to the mother by the substitute caretaker, in her absence, and it is likely that this information may have been biased so as not to worry the mother unduly.

On the mother's return however, the children were having to contend not only with their mothers having been away and returning, but with the sudden presence of a sibling. For most of the children this situation was disturbing and was marked by a range of reactions even within the same individual. Thus one child could be reported as having become more tearful, clingy and excessively demanding of mother's attention, while another could be said to have been delighted at mother's return but since had been difficult.

Here are two examples:

Marian aged 20.75 months

Mother: ". . . she was stamping her feet, and shouting, and the slightest wee thing she was in tears. . . you know a little bump that normally she wouldn't feel . . . but it was all 'Mummy, Mummy' and she wanted me personally . . . to do things, she wouldn't allow her grannie or anyone else to do things for her. . ."

(N.B. . . . indicates a pause)

Eileen aged 29.75 months

Mother: "She was very, very pleased when I came back home, but one thing she has started to do, which was quite interesting for a few days . . . but has stopped now was . . . she would ask you for things she knew she wasn't allowed to have. If you said 'Yes' . . . that was no good, you know you thought . . . poor child, new baby, be a bit more lenient, that wasn't what she wanted. . . what she wanted was a confrontation. So she would carry on asking for things till you had to say No to something and then she would have a tantrum . . . which, the only way was to get rid of her, because she would just scream and shout and was completely impossible. But she seemed to look for rows like this. . ."

Although the reactions of attention-demanding, tearful and clingy behaviours were reported for a number of children in the Main Sample, (see Table 3.3), it will be seen that these behaviours were not reported as frequently for children in the Interviews only group. Here "more positive" reactions of being "more or less normal" and "delighted" were mentioned.

When further analysis involving a characterisation of individual children's reactions was done, an even more marked difference between the two samples emerged.

Children showing little or no disturbance (e.g. no reaction, delighted, more or less normal, more attached to father) were contrasted with those showing disturbance (e.g. demanding attention, tearful, clingy, rejecting and so on). (See Table 3.3).

Table 3.3Reaction to mother's absence and to her return

	Main Sample	Interview Group
<u>Reaction to mother's absence</u>		
Taken quite well, did not appear to mind	16	12
Badly, did not like it	1	3
<u>Reaction to mother's return</u>		
Demanding attention	8	0
Easily upset, tearful, whiny	6	3
Clingy	4	2
Rejecting	1	1
Aggressive	2	1
Ignoring	0	2
Generally difficult	2	2
Increased naughtiness	2	1
Withdrawn	1	0
More attached to Father	1	4
More or less normal	1	6
Delighted	3	6
No reaction	1	0
Hardly disturbed by Mother's return and baby	4	9
Quite disturbed by Mother's return and baby	13	6
	(N = 17)	(N = 15)

Out of the 17 children in the Main Sample, four children appear to have been least disturbed in contrast to thirteen who showed a range of disturbances. In the Interviews only group on the other hand, only six out of the fifteen children were greatly disturbed, and nine least disturbed.

Included in the combined total of nineteen children who were quite disturbed on mother's return, are three of the four who were said not to have taken well to mother's absence. These three were Louisa (Main Sample) and Richard and Nigel (Interviews group).

On mother's return, Louisa was rejecting of both mother and baby, demanded attention, showed an increase in naughtiness was aggressive to her mother especially if her mother 'gave her a row', and all in all was described by her mother at this time as difficult. Richard was delighted to see his mother back, but then became tearful and clingy. Nigel was rejecting of his mother, and would not let her do anything for him. In addition he was said to have become tearful and generally difficult.

Only two of the six boys who were said not to have been interested in the idea of the baby, were disturbed when mother returned with the baby. First was Alvin (Interviews group) who it was said simply ignored his mother, and second was Ian (Main Sample). Ian became tearful, and was aggressive to his mother, but this aggression was also directed once at the investigator. Shortly after arriving for the Two-weeks Post-birth interview, Ian who had always been very friendly and on occasions had spontaneously come to sit on my knee, suddenly hit me with one of his toy cars. Fortunately this incident was not repeated on subsequent visits.

As has already been mentioned, some children were hardly disturbed when the mother returned with the baby. Of the four in the Main Sample (Simon, Peter, Martin, Philip) two were

younger than the median age of 27.75 months, and the other two were older. In the Interviews only group, three out of the nine were younger than the median age of 31 months, and five out of the nine were older. One child was at the median age. Although it appears that more of the older children were least disturbed in the Interviews only group, when the two samples are combined, a similar age spread is obtained for those who were least disturbed as well as those who were quite disturbed.

3. Reactions to the baby

All the children except one were said to be interested in and pleased about the baby, in varying degrees. (See Table 3.4). The one exception was Nigel, aged 49.5 months and the oldest boy in the Interviews only group. Not only was he not interested from the time his baby sister was shown to him, through the nursery window at the hospital, but he continued not to be interested and was the only one said to clearly resent the baby.

Comments about the baby were mostly neutral, e.g. "Wee toes", "Baby sleeping". (See Table 3.4). Younger children tended to point at the baby and identify, e.g. "Baby", and older children commented usually on the baby's state. This reference to the baby was greatest in the baby's presence or when it was absent and could be heard crying.

Questions about the baby were asked by children of about 30 months and over, and they dealt mainly with the baby's feeding, why baby was crying or the baby's anatomy.

From Table 3.4, a difference in the incidence of jealousy

between the Main Sample and the Interviews only group can be observed. This question was particularly difficult to score. Whereas other questions elicited relatively consistent responses, the question of whether the child had shown any jealousy produced contradictory responses of the "No, . . . but. . ." kind. For example:

Mother: "No. . . but he's been showing a reluctance to go to bed . . . and I've been wondering if maybe that was maybe sort of jealousy . . . the fact that the baby is sleeping in beside us and he's being sort of banished to his own room . . . and I thought that might . . ."

or:

Mother: ". . . Not towards the baby, but I feel he's doing it at other things . . . he for example . . . my tomato plants have been wrecked. . . ^ I had six tomato plants up in the bedroom . . . and he's upset them every day until I have only got two now . . . he seems to be doing things for spite in a way . . . you know."

or:

Mother: ". . . not overtly, I would think you can't pin it down specifically to jealousy, but there is . . . there's a definite increase in naughtiness which I think can only be put down to reactions to the baby . . . perhaps a resentment of the amount of my time and attention that the baby takes."

It is felt that many mothers may have reacted more defensively to this question than any other, which tends to negate its inclusion in this interview. The differences between the two samples, relying on somewhat ambiguous responses, may indicate a tendency for the more familiar mothers in the Main Sample to be more defensive on this particular question than mothers in the Interviews only group. Perhaps the Main Sample mothers, through frequent exposure to the general concerns of the investigation, had become more aware of the negative connotation of the question, whereas the Interviews only group mothers were more ready to give "throw-away" (and thus a more honest answer).

It is however, interesting to note that in nine out of the ten cases of jealousy reported for both samples, this occurred when the baby was only being held or being held and fed. This is consistent with Kendrick and Dunn (1980) who reported more confrontations when the mother was involved with the baby.

The only child who was said to show jealousy in situations where the mother was not involved with the baby was Nigel again. He was the only one who was said not to have been interested when the baby was first shown to him at the hospital, and at two weeks post-birth, the only one who was said to clearly resent the baby. His mother felt he was showing jealousy by continuing to say that he did not like the baby, smashing some of his toys, tearing books and occasionally throwing the baby's clothes all over the house.

Children in the Main Sample were reported to imitate the

baby more than those in the Interviews only group. (See Table 3.4). Imitation of the baby took the forms of wanting to drink from the baby's bottle, making baby noises, getting into the baby's pram, crib or bath, lying on the baby's nappy or changing mat and in a few cases wanting a taste of mother's milk. When allowed to taste, the children found that they did not like it.

Less than half of the children in the combined samples were said to have shown signs of regression. Incidents were reported more for children in the Main Sample than the Interviews only group. (See Table 3.4). In all cases this was mild and included instances of occasional 'baby talk' and crawling, wanting to be fed, needing help with going to the toilet and preferring to sit on a pram seat rather than walk.

The majority of children in the two combined samples were reported by their mothers not to have shown signs of being "more grown up" since the baby was born. (See Table 3.4). Seven out of the nine who were said to have become "more grown up" and the three girls who were said to have shown signs of both being "more grown up" and not being "more grown up", were all assessed as such by their mothers more from their saying, "I'm the big brother", "I'm a big girl" than from any sign of independence they had shown. Only in two of the nine children who were said to have become "more grown up" were accompanying signs of improvement observed. Alvin (aged 20.5 months) was said to be no longer reluctant to use the potty and Sandra (aged 39 months) had suddenly got better at being dry at night.

Table 3.4

<u>Reaction to the baby</u>	Main Sample	Interview Group
Interested	17	14
Not interested	0	1
Pleased about the baby	12	14
Ambivalent	3	0
Accepted the baby	2	0
Resents the baby	0	1
<u>Comments about baby</u>		
None	0	4
Neutral, e.g. "See the wee toes" and identify, e.g. "baby" or pointing	15	9
Occasional positive	2	1
Occasional negative	1	1
<u>Questions about baby</u>		
No, cannot ask questions	5	4
Not really	6	4
Yes, lots	6	7
<u>Jealousy</u>		
No	13	9
Yes sometimes	4	6
<u>Imitate baby</u>		
No	4	9
A little	5	3
Yes often	6	3
Only imitates mother caring for baby (one girl both imitates baby a little and mother caring for baby)	3	0

Table 3.4 Cont.

	Main Sample	Interview Group
<u>Regression</u>		
None	8	12
Some, mild	9	3
<u>More grown up</u>		
Yes	2	7
Yes and No	3	0
No	11	8
<u>When baby is crying</u>		
Does nothing	1	0
Concerned	4	7
Gets upset	6	2
Entertains	6	5
Tells mother	12	7
<u>When baby is asleep</u>		
Generally ignores, forgets about baby	11	10
Sometimes goes to look	12	10
Baby is locked in	3	1

Mothers were asked what their children did when the baby was crying and when the baby was asleep. None of the children were said to enjoy hearing the baby cry, and some of the younger children became upset and whimpered. A fair number of children told the mother when the baby was crying (See Table 3.4) and a few asked why the baby was crying. Not many children entertained the baby when it cried, and out of the eleven who were said to do so, nine were girls.

When the baby was asleep, most children generally forgot about it. Occasionally some would go and have a look, stroke its face and sometimes poke it awake.

4. Reactions to mother caring for the baby

When the mother was feeding the baby, most children were said to tend to stay in the same room with the mother and the baby. They would maybe watch the feed for a few minutes, then play with toys, talk to the mother, read or be read to, watch "Play School" on television, or have a drink of juice. Occasionally some children would then wander off elsewhere. A few girls were said to imitate their mothers at this time, cuddling and feeding dollies and teddies.

Four children (Peter, Timothy, Charity, Richard) were reported to occasionally interfere with the feed by attempting to climb onto the mother's knee, making demands that necessitated the mother getting up and in one case insisting on brushing the mother's hair while she fed the baby, but such disturbances were not common.

Table 3.5

<u>Reactions to mother caring for baby</u>		
	Main Sample	Interview Group
<u>Mother feeding baby</u>		
May watch or play around	11	7
Mostly plays on own	3	6
Mother sometimes reads to child	1	3
Child occasionally interferes with feed	3	1
<u>Mother changing baby</u>		
Watches, may watch and then wander off	14	14
Wants to help	3	2
Mostly ignores, carries on with own activity	2	1
<u>Mother cuddling baby</u>		
Sometimes ignores, carries on with own activity	7	7
Sometimes watches, looks	2	1
Sometimes wants cuddled too	3	1
Sometimes wants to cuddle baby too	6	5
Mother does not cuddle baby much in front of child	4	3
Mother includes child too, or compliments	4	6

It appears to be very general that the children in both samples were fascinated by their new sibling's excretory functions. Apart from three children: Jane, Martin and Nigel, who were said to often continue with their own activities, the rest were always there to watch when the baby was being changed. (See Table 3.5). Some would wander off after a few minutes, but they wanted to see what was in the nappy and they passed comments often accompanied by giggles and laughter.

Laughter however, was not the children's characteristic reaction to the mother cuddling the baby. Since the figures in Table 3.5 do not add up to the group totals, it can be deduced that some children reacted in a variety of ways on different occasions. Some mothers who were aware that the child may feel left out or resent the overt expression of affection to the sibling, reacted in one of two ways: either they tried to avoid excessive cuddling of the baby in front of the child, or cuddled both the child and sibling together - "double cuddles". At times some of these mothers also complimented the child to the baby, thus counteracting any "negative" feelings the child might have whilst seeing the mother cuddling the baby.

DISCUSSION

The children in the two samples studied here, were informed beforehand of the expected arrival of their siblings, just as Doctors Spock (1969) and Jolly (1975) advise. Initially, the mothers gave limited and relatively simple information, but if the children were inquisitive, and this was

true mostly for the older ones, then more information was given. Interestingly though, a number of children wanted to know how the baby would come out, but no one child ever asked how it got there in the first place. Legg et al (1974) reported a similar observation for most of their sample which included five year olds.

Apart from just telling the child of the expected arrival, mothers also took concrete measures towards preparing the first child for what to expect. Thus, mothers and children visited friends with very young babies, read books and generally talked about babies.

With all this preparation then, there is a sense in which "reacting to the sibling" can be said to have started at the time the child was informed, or maybe even before. Some children may have gradually noticed the change in mother's shape, being unable to sit on her lap and being increasingly controlled as far as active and vigorous movements, particularly on mother's tummy, were concerned. The mother on her part, would have found it progressively more difficult to pick up the child for example, and together with the chemical and hormonal changes taking place in her own body, it is suggested that all these aspects amongst others, may have contributed and been part of the process of reacting, rather than just to the physical presence of the baby when it finally arrived. It is thus proposed, that reacting to the sibling probably started in some form before the sibling was born.

No amount of preparation however, appears to have shielded the children from being disturbed when the mother

returned home with the baby. There was the confounding factor of the separation, but Dunn, Kendrick and McNamee (1981) found that even when the mother had the second baby at home, the first child was still likely to be disturbed. Henchie (1963) also found no difference between children who had been separated from mother during confinement and those who had not, with respect to the children's reactions to the birth of a baby. There is a strong suggestion therefore, that the 13 out of 17 children in the main sample, and the 6 out of 15 in the Interviews group, who showed a range of disturbances on mother's return, were probably reacting more to the presence of the baby than to the mother's having been away. Further, most children had visited their mothers in hospital, as such it had not been a total separation.

One question on which there was a difference between the two samples, and which has already been mentioned, was the question to do with "jealousy" (Q. 12). It has already been suggested that most mothers may have reacted to this question more defensively than any other. This should not be surprising. The term "jealousy" is heavily and negatively loaded, and to admit that one's child is jealous (probably more so for a middle-class mother), is to acknowledge failure at not having successfully prevented it. A second possible explanation, which has nothing to do with middle-class mothers being defensive, is that jealousy can take many forms (Jolly, 1975; Spock 1969). Both these child-care experts, give several examples ranging from an older child behaving abominably and thereby getting attention, to hitting the baby and to being

totally obsessed with the baby. Therefore, what one mother may regard as behaviour indicative of jealousy, another may not. And it is probably this uncertainty about what is jealousy, that gave rise to the "no . . . but" responses mentioned earlier. If the sense of the question is to be retained in the interview schedule therefore, it may be better to remove the term "jealousy" and replace it with a concept less negatively defined, or obtain from mothers only actual descriptions of behaviour rather than interpretation, which is what "jealousy" is.

Since the study by Legg et al (1974), mainly cites examples to illustrate various reactions to the birth of a sibling, and does not present overall frequencies of children showing particular behaviours, the only other study with which the one being presented here can be compared is that by Dunn, Kendrick and McNamee (1981). Percentages have been calculated, based on the numbers of children they presented as showing certain behaviours after the sibling birth. These percentages, as well as those from this study, on a small selection of behaviours are presented in Table 3.6.

It can be seen that, on almost every behavioural comparison in (a), the children studied by Dunn, Kendrick and McNamee (1981) are more likely to show the various behaviours. Thus, more of their children were demanding, tearful, clingy and negative in behaviour towards their mothers, compared to the ones studied here. Many more of them showed regression, but when the figures are compared only for mild regression exactly the same incidence is found between the two groups. More of

Table 3.6

Comparative percentages of children showing the
following behaviours after sibling birth

	<u>Dunn, Kendrick & McNamee (1981)</u>	<u>Own Study</u>
(a) More demanding	92.5	25
Tearful	60.0	28.1
Clingy	57.5	18.7
Negative behaviour towards mother	77.5	15.6
Regression (Mild + definite)	70.0	37.5
Mild regression	37.5	37.5
Imitate baby	75.0	53.1
(b) Verbal references and comments about baby	80.0	84.3
Concern when baby cries	60.0	56.2
Entertains baby	55.0	34.3

N.B. 1. Except for mild regression the percentages above are based simply on the numbers of children showing a behaviour, irrespective of the frequency or intensity of the behaviour.

2. The percentages in my own study are based on the combined totals of children in the Main Sample and the Interviews only group.

their children also imitated the baby, but the difference on this measure is comparatively small in relation to the differences on the other measures.

The second lot of comparisons (b) which could be described as "positive reactions" agree closely on two of the behaviours. Thus, verbal references and comments about the baby, and showing concern when the baby cries, was shown by similar numbers of children in the two studies. However fewer children in my own study entertained the baby when it cried and fewer showed signs of being more grown up.

In conclusion then, the birth of the sibling was disturbing for the children studied here, but apparently less so than for the children studied by Dunn, Kendrick and McNamee (1981). The age ranges of the children were fairly similar, except for the five children in my study who were older than 43 months - the oldest in their study. The sex composition of the first borns in our samples were very similar, and both sets of data were based on interviews. The only dimension on which our samples really differed, was socio-economic. Their sample was largely working-class, and mine largely middle-class. It is possible therefore, that this difference might have contributed appreciably to our separate findings, especially as social class differences have been reported in child-care practices (e.g. Newson and Newson 1968). Certainly the middle-class and child-centred nature of most of the mothers studied here was evident in preparing the children for the birth; in the importance attached to the children visiting mother in hospital and therefore a sense of continuity of

mother; and when it was time for mother to return home, the children were involved in "bringing our baby home". Once home, most mothers tried to minimise the changes on the first child's life, especially those to do with the baby's physical presence. Hence most babies were fed, then tucked away out of sight where they slept most of the time anyway.

However, whether social class differences were important in determining the children's reactions to the birth of the sibling, can only be confirmed when the rest of the findings in this thesis have been presented, and compared with those of Judy Dunn and her colleagues, and other workers.

Chapter 4

Temperament

INTRODUCTION

The New York Longitudinal Study (NYLS) by Thomas, Chess et al (1963, 1968) Thomas and Chess (1977) is probably the most well known and most widely quoted study of temperament in children (La Barba 1981). The term "temperament", according to Thomas and Chess (1977) refers to the way an individual behaves, his characteristic behavioural style. Although these authors, in the 1977 publication, made a distinction between "temperament" as being "those stylistic characteristics which are evident in the early infancy period", and "behavioural style" as the "characteristics or trends which appear in later childhood or adult life" (p. 10), it is felt however that these two terms share more similarities than differences, and will be here used interchangeably. Both emphasize the characteristic way in which behaviours are carried out, the how rather than the what or why of behaviour (ibid.).

In a study of middle-class children begun in 1956 in New York city (NYLS), Thomas et al interviewed mothers at regular intervals, beginning from when their children were 2-3 months old. From these interviews they obtained detailed information on the children's characteristic reaction patterns in a wide range of specific situations. This information was found to agree highly with that obtained from observation of the children. On the basis of the interview information, they

identified nine categories of temperament. These categories were:

- Activity level
- Rhythmicity
- Approach or Withdrawal
- Adaptability
- Threshold of Responsiveness
- Intensity of Reaction
- Quality of Mood
- Distractibility
- Attention Span and Persistence

(For definitions of these categories, see Thomas and Chess 1977, p. 21-22).

On the basis of ratings on some of these categories, they identified three constellations or diagnostic categories of "easy", "slow to warm up" and "difficult" child.

The easy child is characterised by regularity in biological functions, high approach to novel stimuli, high adaptability to change, mild intensity and predominantly positive mood. The slow to warm up child is mild in intensity, low in approach and adaptability, and given time will eventually "warm up" and show interest in new activities. The difficult child is irregular in biological functions, low in approach and adaptability, highly intense and frequently negative in mood.

About 65 per cent of the children in the NYLS could be classified according to these categories. The other 35 per cent could not be easily fitted into these categories due to varying combinations of temperamental traits.

Since the original study was begun, and most of the individuals in it were still being followed in 1977, many other groups have been studied, ranging from working class children of Puerto Rican parents, to Israeli kibbutz children and to children with intellectual and physical handicaps. (Reported in Thomas and Chess 1977). Apart from identifying individual differences, temperament, especially the "difficult" pattern has been related to and has predicted the development of behavioural disorders. (Rutter et al, 1964; Thomas, Chess and Birch, 1968, 1970). In the present study, an assessment of temperament developed by Sturge and based on other temperament assessments, e.g. Graham, Rutter and George (1973) and originally Thomas, Chess and Birch (1968) was used. The reason for its inclusion and the multi-dimensional approach have already been presented in the section on Methodology (see p.38-39). The assessment comprised of a series of questions to the mother relating to seven categories of temperament. Their definitions based on the earlier mentioned scales were:

1. Activity: The proportion of active periods to inactive ones. Information on motor activity during bathing, dressing, eating, playing and when taken for walks was included in this category.
2. Mood: "The amount of pleasant, joyful and friendly behavior, as contrasted with unpleasant, crying and unfriendly behavior". (Thomas and Chess 1977, p. 22).
3. Intensity: Degree of expression or energy of response, be it during laughing, crying or playing.

4. Assertiveness: Instances of asserting oneself, wanting to get one's way, defiance, as contrasted with submissiveness, giving in and compliance. Information on playing with other children and when reprimanded by parent was included in this category.
5. Persistence: Perseverance in an activity or continuing to make demands in contrast with seeking help or giving in and accepting what is offered.
6. Approach-Withdrawal: Initial response to strange persons, novel situations or experiences. Approach reactions are friendly and accepting, whereas withdrawal reactions are unfriendly and rejecting.
7. Malleability: The ease with which a child is adaptable or amenable to changes in his environment.

As this thesis focusses on the effects of the birth of a sibling, the assessment of temperament was done twice, once before and once after the birth. The precise schedule was one month before the birth and three months after the birth of the sibling. In so doing, it was sought to determine whether the children's characteristic reaction patterns or behavioural styles were influenced by the birth of the sibling. It has been suggested that changes in the environment, particularly stressful ones, may modify temperament (Thomas and Chess 1977). The birth of a sibling is seen as one such stressful factor.

METHOD

Subjects:

The main sample of 17 first-born children, nine boys and

eight girls served as subjects. Their ages ranged from 17.25 to 49 months, with a median age of 26.75 months when the Temperament assessment was first done. This was one month before the birth. They were all about four months older when the assessment was done the second time round, that is three months after the birth of the sibling.

The temperamental characteristics assessment is in Appendix 4 . Note that alphabetical letters denoting both the category and levels within the category (e.g. Activity = a.b.c.) were omitted on the mother's copy.

This assessment, which was conducted as a questionnaire, was completed by each mother during a scheduled home visit by the Investigator.

SCORING PROCEDURE

As can be seen in Appendix 4 , alphabetical letters which denoted each category also served to divide the category on a three-point scale as follows:

- | | |
|------------------------|---|
| 1. Activity | a.b.c. - High, Medium, Low |
| 2. Mood | d.e.f. - Positive, Variable, Negative |
| 3. Intensity | g.h.i. - High, Medium, Low |
| 4. Assertiveness | k.l.m. - High, Variable, Low |
| 5. Persistence | p.q.r. - High, Variable, Low |
| 6. Approach/Withdrawal | s.t.u. - Approach, Variable, Withdrawal |
| 7. Malleability | v.w.x. - High, Variable, Low |

In analysing their data, Thomas et al (1963) used three procedures - a preponderance model, a ranks model and a percent-rank index. For each category three scores were obtained for

each of the three levels - high, medium and low. The preponderance model selects the highest of the three scores as indicating the level of functioning for a particular individual, for the particular category of temperament. However, as they realised in using only the most frequent level, the non-preponderant responses were not being utilised. Further, the preponderant model could not fully differentiate between individuals. To use their example (p. 63), the scores for two children on Activity are as follows:

	H.	V.	L.	
Child No. 1	16	0	1	H. = High Activity
				V. = Variable Activity
Child No. 2	9	2	8	L. = Low Activity

Now, both children would be classified as highly active by the preponderance model, even though closer examination of the scores would reveal a marked difference.

By using a ranks model, they sought to make use of all the available data. Thus the preponderant rating was given a rank of 1, the intermediate a rank of 2, and the least preponderant a rank of 3. Although this model produced a less skewed distribution compared to the preponderance model, a table involving all the possible combinations of ranks 1, 2 and 3, including tied ranks proved cumbersome.

Their third procedure, that of a percent-rank index, involved converting each of the three scores for each category into a percentage of the total score. One of the main reasons for using the percent-rank index was to magnify individual differences on amodal extremes for the group as a whole.

These methods of analysis, while producing interesting results, did not make use of most of the information from the original scores. In the results to be presented here therefore, a different kind of analysis was done. For each individual child, frequency scores were calculated for each of the three levels, for each category in turn. Then the "low" score was subtracted from the "high" score, for each individual child, for each category. The resultant score was then taken as the child's score for that particular category. In so doing, it was thought a more accurate assessment of an individual's reaction pattern, not based on either extreme would be obtained.

RESULTS

Session I = Temperament assessment done before the birth

Session II = Temperament assessment done after the birth

Four main questions were asked of the data:

1. Do the children's behavioural styles change from before to after the birth of the sibling?

If there is change:

2. Is it due to associations between the different dimensions of temperament?

3. Is it related to the children's age?

4. Do individual children show marked variation in temperament from before to after the birth?

1. Do behavioural styles change from before to after the birth?

Table 4.1 reveals that only three of the measures changed significantly from before to after the birth. These were, for

the children as a group to become more active, more assertive and less malleable after the birth of their siblings. There were non-significant tendencies towards being slightly more positive in mood, more intense, more persistent and slightly more withdrawing after the birth compared to before the birth. However, the low standard deviations in Table 4.2 indicate that both the significant and non-significant results were not due to greater variability in the distribution of scores in either session. Why the children became more active is not clear, but becoming more assertive presumably pays off in a situation where the mother's attention has to be divided. That the children became less malleable may be a reflection of their relationships with their mothers. This would obtain support from the finding of Dunn and Kendrick 1980(a) which showed that there was an increase in conflicts and confrontation between mothers and children after the sibling births. Therefore with the children becoming less malleable, there would be increases in confrontations.

Table 4.1

Comparisons of categories of temperament between
Sessions I and II

(Wilcoxon Matched-pairs Signed-ranks, 2 tailed)

Activity	I < II	p = .02	(N = 15, T = 20)
Mood	I < II	ns	(N = 13, T = 42.5)
Intensity	I < II	ns	(N = 14, T = 43)
Assertiveness	I < II	p < .01	(N = 15, T = 14.5)
Persistence	I < II	ns	(N = 16, T = 57)
Withdrawing	I < II	ns	(N = 9, T = 14.5)
Malleability	I > II	p < .02	(N = 13, T = 12.5)

Table 4.2

Standard deviations (S.D.)-for each category and
between sessions

	<u>Session I</u>		<u>Session II</u>	
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>
Activity	2.7	1.67	3.5	1.68
Mood	4.1	1.55	4.2	1.29
Intensity	1.2	1.57	1.5	1.24
Assertiveness	.9	1.97	2.4	2.17
Persistence	2.0	1.45	2.2	1.31
Approach/Withdrawal	2.3	1.24	2.5	1.35
Malleability	2.5	1.85	1.4	2.17

Session I = Assessment done one month before the birth

Session II = Assessment done three months after the birth

2. Is the change related to associations between categories?

Table 4.3 (top right hand half of matrix) shows that none of the dimensions of temperament were significantly correlated with each other before the birth of the sibling, when a 2-tailed test was used. On the basis of a one-tailed test however, and in agreement with Dunn and Kendrick (1980b), the correlation between intensity and assertiveness was significant. This suggests that these two dimensions may have shared a common component, probably "strength" or "vigour". The other significant correlations reported by Dunn and Kendrick (1980b) between activity and intensity; negative mood and unmalleability; and assertiveness and unmalleability, were not obtained here. The reason for this disparity is not known.

Table 4.3

Temperamental characteristics Correlation Matrix for
Session I Scores (top right hand half of matrix) and
difference scores between Sessions I and II (bottom
left hand half of matrix)

	Acti- vity	Mood	Inten- sity	Assert- iveness	Persis- tence	App/ Withd	Malle- ability
Activity		.03	.10	.06	-.26	-.14	-.10
Mood	-.08		.28	.10	.22	.05	.35
Inten- sity	.18	-.17		.43*	.20	.21	-.03
Assertive- ness	.32	-.24	-.02		.06	-.09	-.25
Persis- tence	-.23	.47*	.09	-.11		-.003	-.06
Approach/ Withd.	.33	.02	.28	.29	-.25		.07
Malle- ability	.14	.22	-.32	.40*	-.01	.10	

Note: None of these correlations are significant at the 5% level (2 tailed test). * = Significant for N = 17 at $p < .05$ (one-tailed test).

Still in Table 4.3 (bottom left hand half of matrix) it can be seen that the difference scores between Sessions I and II were also not significantly correlated for any of the categories of temperament. That is, in the context of the effect of the birth, the categories were not significantly associated, when a 2 tailed test was used. On the basis of a

one-tailed test, however, persistence and mood; malleability and assertiveness were significantly correlated. But as no predictions were made prior to obtaining these results, those obtained by using the 2 tailed test will be adhered to here.

To summarise therefore, the dimensions of temperament were both independent of each other before the birth of the sibling, and in the context of the effect of the birth. Therefore the changes in Activity, Assertiveness and Malleability which occurred after the birth, were independent of each other, and of the other categories.

3. Is the change in behavioural style related to age?

Session I and Session II scores were separately correlated with age. So were the difference scores between Sessions I and II. (See Table 4.4). None of these correlations reached the 5 per cent level of significance, and the majority were rather low. A few of the relatively higher correlations however deserve mention. Before the birth of the sibling, there was a tendency for the older children to be less active and more malleable. After the birth, these two correlations disappeared, but the tendency for the older children to be more approaching was stronger than it had been before the birth. These age changes however, support the findings in Section I, namely that Activity and Assertiveness increase and Malleability decreases after the sibling births, in that these changes are not simply the result of the age difference (4 months) between the two sessions. Indeed for both Activity and Malleability, the age trends of Session I are in the opposite direction to those found for the changes after the births of the siblings.

Table 4.4Temperamental characteristics - Correlations between age and:

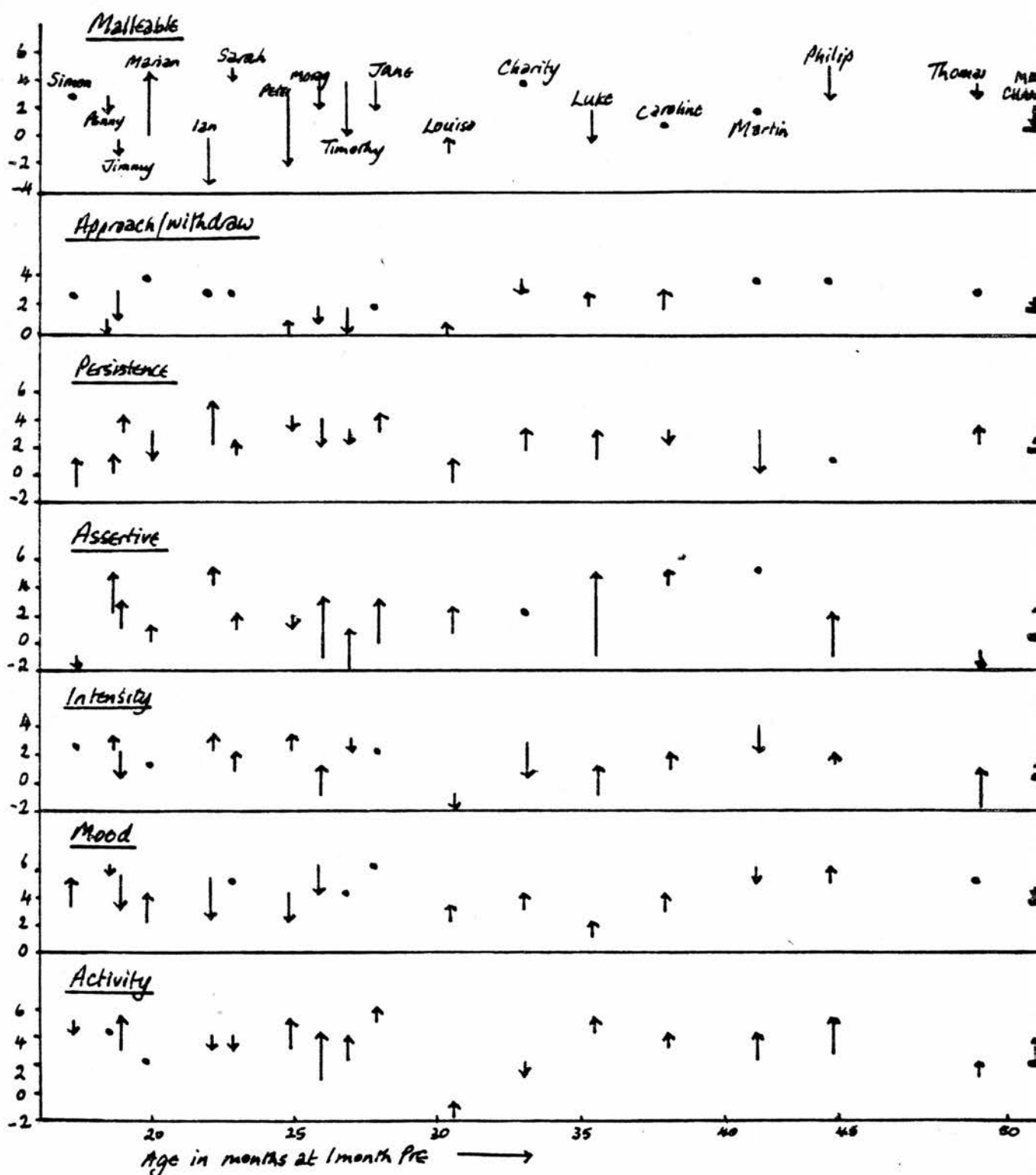
	Scores in Session I	Scores in Session II	Difference Score (II-I)
Activity	-.47 *	.01	.47 *
Mood	.001	.16	-.38
Intensity	-.07	-.18	.37
Assertiveness	.004	.15	.07
Persistence	.10	-.01	-.15
Approach/Withdrawal	.19	.41 *	-.03
Malleability	.32	-.07	-.15

Note: None of these correlations are significant at the 5 per cent level (2 tailed test). * = Significant for $N = 17$ at $p < .05$ (one-tailed test).

As has been mentioned, the correlations between age and difference scores (Session II-I) were also not significant. Figure 4.1 shows the degree of change from before to after the birth, for individual children by age. As can be seen, no clear and definite relationship between degree of change and age exists, except perhaps for the illusory effect of greater change in the younger children. This is caused by the under-28 month-olds being closer in age than the older age group.

However, in conjunction with the results in Table 4.4 there appears to have been a tendency for Activity and Intensity to be affected more in the older children, and Mood more in the younger children, after the birth.

FIG 4.1 Temperamental characteristics: Degree of change between Sessions I and II, relative to the individual, by age, for each dimension.



↑ = Increase from Session I to II
 ↓ = Decrease from Session I to II
 • = No change from Session I to II

Note: The same individual is presented in the same relative position on each dimension.

4. Do individual children show marked variation from before to after the birth?

The absence of significant correlations with age, both before and after the birth, indicated that age was not a factor in the behavioural styles manifested by the children.

Dunn and Kendrick (1980b), using the same Temperament characteristics assessment as was used here, divided up their sample of children on each dimension of temperament into two groups; one group consisted of children scoring on or below the median, and the other of those scoring above the median.

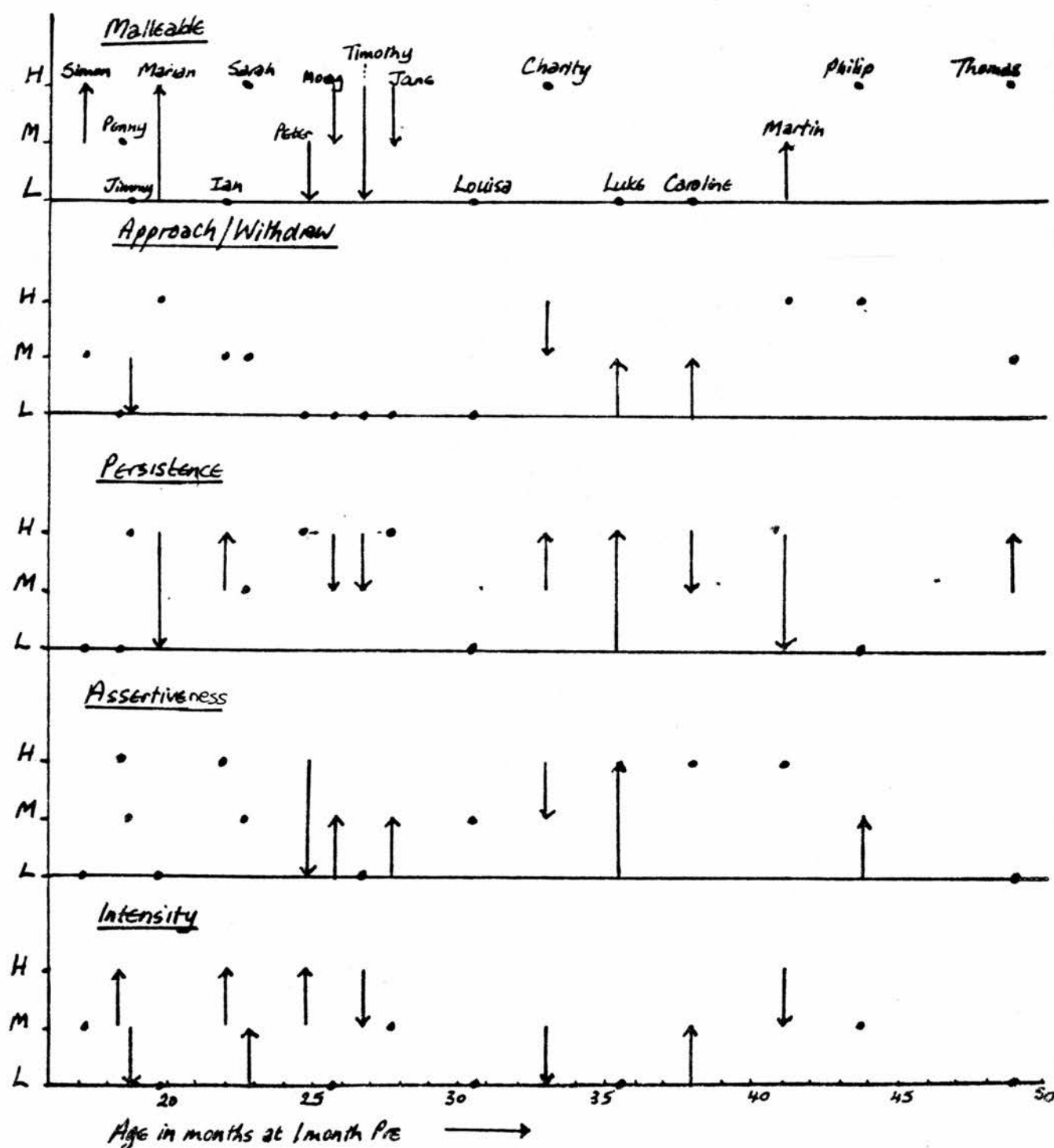
Using a similar procedure, the children being studied here were divided into three groups - those scoring on the median, below the median and above the median. This was done for each of the seven dimensions, for before and after the birth. Figure 4.2 shows the results of this analysis, and presents the degree of change (or lack thereof) between the two sessions, for each individual child in relation to the group median. The first point to note is that there is more inconsistency or instances of change in some categories than in others. Thus there is a tendency for individual patterns to be more unstable for Activity and Mood, and to a lesser extent for Intensity and Persistence over the two sessions. On the other hand, individual patterns for Assertiveness and Malleability tend to be stable before and after the birth, and for Approach/Withdrawal significantly so ($p = .05$). It is interesting that Approach/Withdrawal, that is responses to new persons and events, should be the only one on which individual children show significant consistency in both sessions. Thomas

and Chess (1977) paid special attention to this category and commented that it "provided especially rich information on a child's individual temperamental pattern". (p. 20).

The second point to note from Figure 4.2 is that some individuals show more consistency than others (in scoring at the median, below or above it), on the various dimensions of temperament between the two sessions. We will return to this point shortly.

Before the birth, no one child could be classified according to Thomas and Chess' (1977) "easy", "slow to warm up" or "difficult" category. After the birth, only two children could be thus classified. Peter (aged 28.75 months) showed the "difficult" child pattern and Phillip (aged 47.75 months) the "easy" child pattern. Considering that Thomas and Chess (1977) could classify 65 per cent of their study population, that achieved here can only be described as far from satisfactory. This inability to classify according to their three diagnostic categories could be explained by the fact that their particular form for assessing temperament was not used here, the scoring was not identical to theirs and only four out of the five main dimensions they use for categorisation were employed here. However, these four dimensions (Mood, Intensity, Approach/Withdrawal, Malleability) closely resemble the cluster of categories that identifies the "easy" and "difficult" child (ibid.). Further, differences in children on these four dimensions were found by Dunn, Kendrick and McNamee (1981) to be related to the way in which children reacted to the birth of a sibling. Therefore, the fact that

FIG 4.2 Temperamental characteristics: Degree of change between Sessions I and II, for each individual in relation to the group, by age for each dimension.



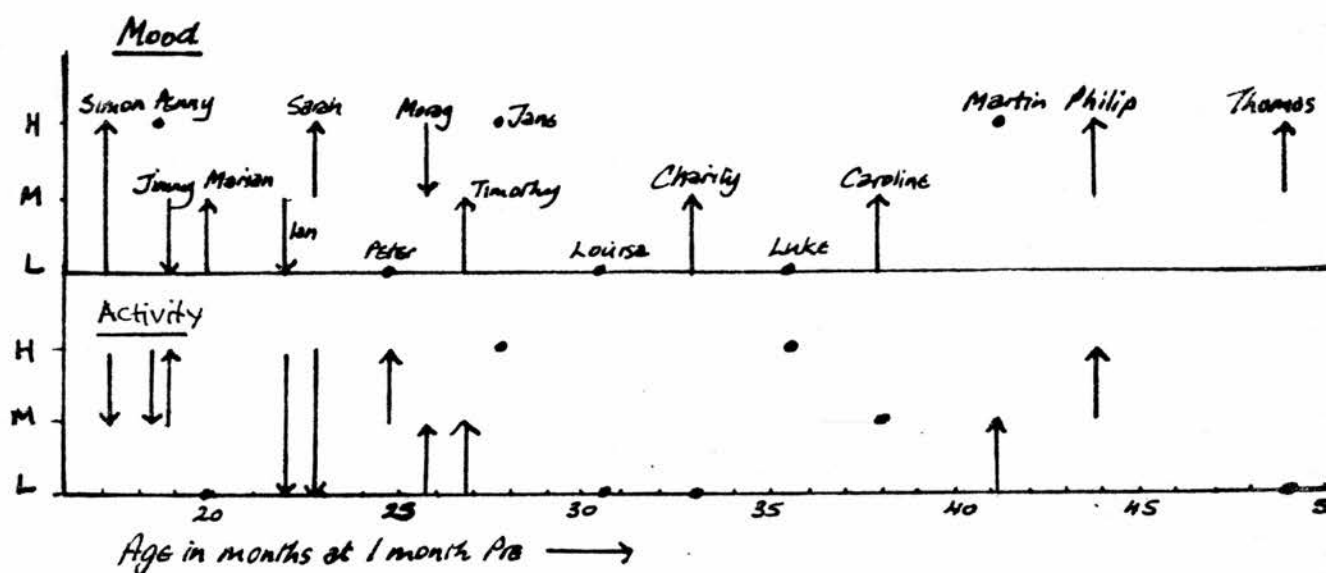
- ↑ Increase
- ↓ Decrease
- No change

Note: The same individual is presented in the same relative position on each dimension.

H = Score above the median
M = Score at the median
L = Score below the median

cont./

cont./



only four of the categories were employed in this study, can not account for the failure to classify according to the three diagnostic categories.

The process of classifying is made even more complex by the finding that children do not necessarily show the same constellation of behaviour patterns before and after the birth. Some children consistently function at, below or above the median on some dimensions, and also show shifts on other dimensions, whereas others predominantly show changes over the two sessions. This ability to show consistency or inconsistency between the two sessions, may be an important characteristic in itself, and probably highlights individual differences just as well as the diagnostic categories of "easy", "slow to warm up" and "difficult". Since the three diagnostic categories were not obtained here, we will focus on the consistency or inconsistency among individuals.

Table 4.5

Number of children showing consistency on dimensions
of temperament, before and after the birth

1 child	consistent on all 7 dimensions
3 children	consistent on 5 dimensions
5 children	consistent on 4 dimensions
5 children	consistent on 3 dimensions
3 children	consistent on 2 dimensions

N = 17

Table 4.5 shows the number of children who maintained consistency of functioning over a specified number of the

temperament dimensions. This information is abstracted from Figure 4.2. If we disregard for the moment, the five children who showed median consistency (that is four dimensions), and the three and five children who differ only in terms of one category from the median (five and three respectively), it can be seen that a total of four children lie at the extremes. The first of these, Louisa (aged 34.5 months at 3 months post-birth) was consistent on all seven dimensions of temperament, from before to after the birth. In so doing, she was an exception. The other three children (Morag - 29.75 months; Timothy - 30.75 months and Charity - 37 months, all at three months post-birth) maintained the least stability in patterns of functioning relative to the group. They were all consistent on only two dimensions, and, in addition all showed inconsistent patterns on Mood and Persistence.

These four children have been singled out only because they fell at the extreme ends of the group. Inability to classify all seventeen children, or most of them, into "neat groups", probably adds strength to the idea of temperament as being the individual's unique way of functioning. Further, the varying combinations obtained for before and after the birth, for any one individual, for all seven dimensions of temperament, made the attempts at classifying daunting ones.

DISCUSSION

As would be expected, age was not related to the behavioural styles manifested by the children studied here, either before or after the birth of the sibling. This would be expected because

an individual's characteristic behaviour pattern has to do more with the particular individual, his uniqueness, rather than his age. However, unique as each of the seventeen children were, the common experience of acquiring a sibling, did have a pervasive effect on three dimensions of temperament. These were, that the children became more active, more assertive and less malleable. Possible reasons for these changes have already been given, in the case of assertiveness and malleability (see p.78).

Undoubtedly however, focus has to be on the failure in this study to classify according to Thomas and Chess (1977) three diagnostic categories. Admittedly, these authors did point out that not all children could be classified, but the problem here was none of the children could be classified, except for the two in the after-birth session. Carey (1970) put forward the problem of classification as one of the limitations in the application of the diagnostic categories. His example was that, if a child was irregular, but at the same time showed the constellation of behaviour patterns that described the "easy child", it could not be said that the child was completely easy or completely difficult. The same variety of patterns was shown by the children studied here. Thus, one child might have a combination of easy and difficult patterns, or some other combination, which made it impossible to classify according to the diagnostic categories. Buss and Plomin (1975) have argued for only two temperament combinations out of their total of four temperaments, as a way of avoiding the complexity that arises from combinations of three or more temperaments.

Using the median as the standard in the present study, could not have contributed to the failure in classifying. Thomas et al (personal communication cited in Carey 1970) used the mean as the standard for converting scores into the diagnostic categories.

Apart from the problem of classification, another area that merits discussion concerns the individual patterns that emerged after the sibling births. Temperament is the result of interaction between the organismic characteristics and the environment (e.g. Rutter et al 1964). A change in either component may result in a change in the nature or expression of temperament (Thomas and Chess 1977). The birth of a sibling involves a change in the nature of the first child's environment. As such it can be expected to modify temperament. For most of the children this was indeed the tendency. A comparison of the number of children scoring below and above the median number of consistent categories (8 vs. 4 respectively), shows that the tendency was towards instability or change in behavioural style after the birth. Unfortunately there do not appear to be published studies in which the assessment of temperament has been done before and after the birth of a sibling, and with which the results reported here could be compared.

Up until now we have referred to temperament only in relation to the first-born children. But obviously first-born children do not exist in a vacuum, and the emphasis in this thesis is on the relationship between mothers and first-born children. Ordinarily we would expect the majority of

relationships between mothers and their first-born children to be harmonious, and their temperaments to "mesh". However, if as has been found here, there is a tendency for the children's behavioural styles to change after the birth of the sibling, the question then becomes - what of the other family members? Do the mothers' temperaments change too? Does the "meshing" between the temperaments of the children and the other family members change too? Dunn and Kendrick (1980b) have suggested that if a child's temperament is assessed (as it often is) in terms of the child's behaviour with mother, then the child's temperament is a reflection of his relationship with mother. It is thus possible that the tendencies reported here, that is towards change in behavioural styles at 3 months post-birth, mirror changes in the relationships between mothers and children at this time. Whether there are changes in the mother-child relationships at 3 months post-birth, will be seen when the results on interaction are presented (see Chapter 7).

Chapter 5

Ainsworth's Strange Situation

INTRODUCTION

In what has become a classic experiment, Ainsworth and Wittig (1969) introduced 14 infants who were about one year old into an unfamiliar environment, also called the "strange situation". They sought "to observe how the attachment to . . . mother - influenced . . . behavior in a situation that was unfamiliar. . ." (ibid.). They were particularly interested in three aspects of this behaviour:

- (a) the child's "use of his mother as a secure base from which to explore the world,
- (b) his response to his mother's leaving the room, and to her return, and
- (c) his response to a stranger" (Ainsworth and Wittig 1969, p. 111).

They expected that both the anxiety caused by mother leaving the room, and fear of strangers would be heightened in the strange situation, compared to the familiar home environment, and therefore increase the frequency of attachment behaviours. Also, they expected some relationship between the security of a child's attachment and his reaction to being left by mother in an unfamiliar room.

Their procedure involved a series of eight episodes, conducted in a fixed order for all subjects. The episodes, and the identity of the individuals taking part were as follows:

1. Mother, Child, Observer.
2. Mother, Child.
3. Stranger, Mother, Child.
4. Stranger, Child.
5. Mother, Child.
6. Child Alone.
7. Stranger, Child.
8. Mother, Child.

Excluding episode 1, which merely involved the observer introducing the mother and child into the 'strange room', it can be seen that the episodes were designed to start off least stressfully for the children, and to gradually become more stress producing. Hence, whereas episodes 2 and 3 lasted for three minutes, the rest were variable and indeed curtailed if the child became highly distressed.

The main aspect Ainsworth and Wittig (1969) were interested in, that of the child's use of his mother as a secure base from which to explore in a strange situation was confirmed. Also, individual differences based on the degree of distress shown by individual children in the separation episodes were identified. (But see page 141). Later, strange situation behaviour was found to be related to the "attachment-exploration balance" in the home (Ainsworth, Bell and Stayton 1971) and to the quality of mother-child interaction (Blehar, Lieberman and Ainsworth 1977). Other workers who have employed the procedure have reported relationships between children's behaviour in the strange situation and interaction with peers (Easterbrooks and Lamb, 1979), quality of play (Main 1974),

mother-child interaction in the home (Connell 1978) and nursery school behaviour (Maccoby and Feldman 1972).

In the present study, a slightly modified and shortened form of the procedure was used. The modification was deemed necessary because Ainsworth and Wittig (1969) found that when their children were separated from the mother in the second of two 'separation episodes', they became greatly disturbed. Rheingold (1969) also reported a similar observation. The effect of the upsetting episodes appeared to result in cumulative stress. For this reason, the children in this sample were separated from the mother only once. It was felt unethical to do otherwise. Thus only the first five episodes were conducted. The three afore-mentioned aspects of the child's attachment to his mother (a-c, page 93) were as in the original study of interest as indicators of the security of attachment. Using these, it was intended to observe possible changes in attachment due to the birth of a sibling. The most obvious assumption is that the first child becomes less secure in his relationship with mother after the birth of a second child. But possibly, those who were initially very secure or very insecure react differently to this circumstance.

METHOD

Subjects:

The main sample of 17 children served as subjects. Their ages ranged from 16.25 to 48 months, with a median age of 25.75 months when they were first introduced to the strange

situation. This was two months before the birth of the sibling. They were all six months older when they were re-introduced to the strange situation the second time round, that is, four months after the birth of the sibling.

(Comments on age effects in general, and the influence of previous experience in the 'strange situation' the second time round, have already been made. See Methodology page 40, 33.)

Materials:

T.V. monitor and recorder, fixed T.V. camera, Portable T.V. camera and recorder, stop watch, $\frac{1}{2}$ watt 'signal' light bulb, microphone.

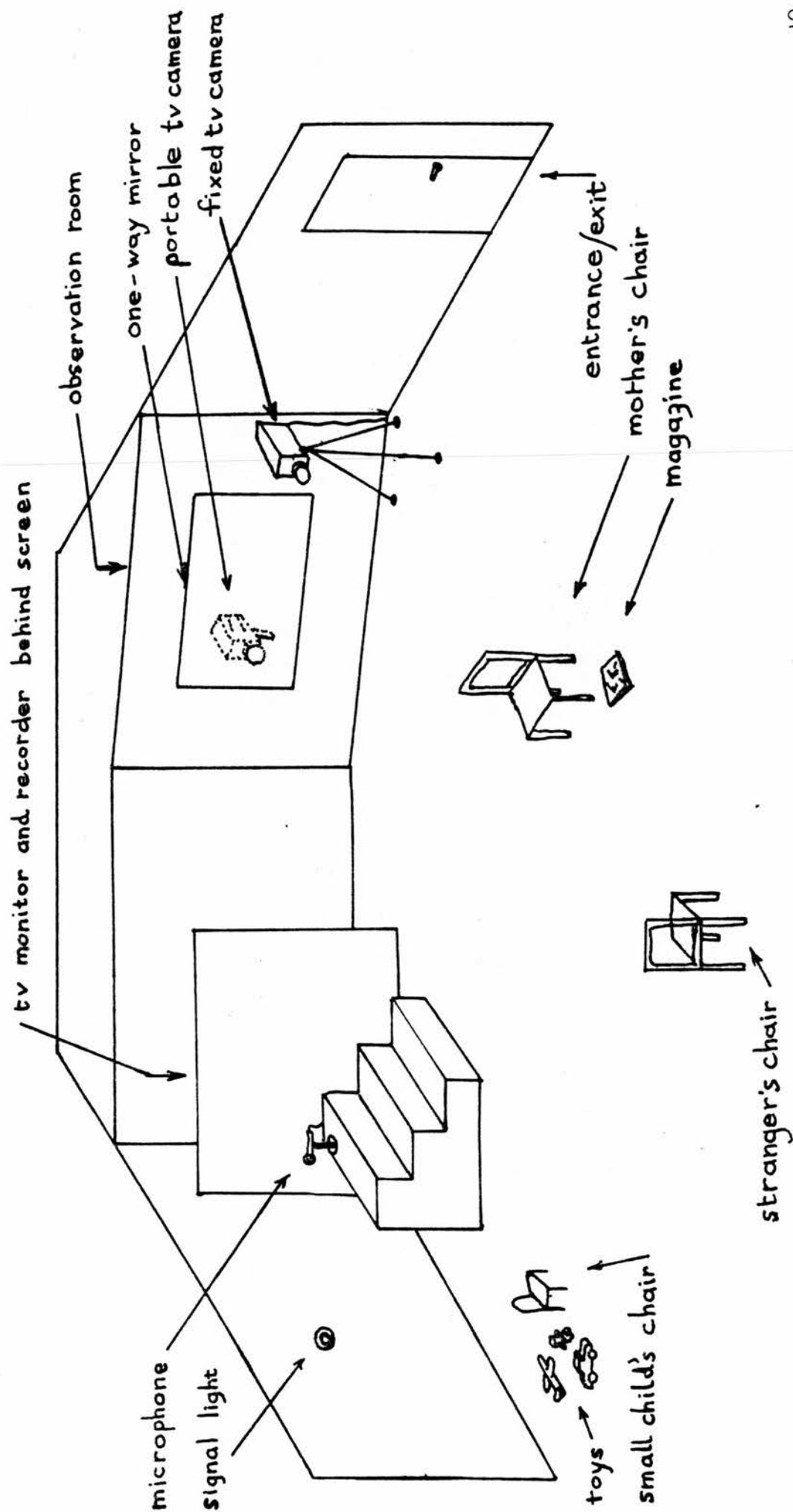
Setting:

Figure 5.1 shows the layout of the room which served as the strange situation. As can be seen, the mother's, stranger's and child's chairs were arranged to form a triangle and several interesting toys were placed on the floor near the child's chair. Among the toys were cars, a wooden road track, aeroplane, doll and clothes, farm animals, leggo, plastic shapes and age-appropriate jig-saws.

The microphone transmitted sounds from the experimental room onto the Portable T.V. recorder. These same sounds could be heard in the observation room, from where the signal light bulb was remotely controlled.

The picture on the T.V. monitor although visible from the observation room, could only be seen by the children if

Fig 5.1 'Strange Situation' - layout



they approached the area next to the screen.

The one observer remained unseen in the observation room, timing the episodes and filming the child's actions and following his movements. A floor space covering 15 feet by 12 feet was available to the child.

As in Ainsworth and Wittig's procedure, both the mother and the stranger were informed beforehand about their particular roles. They were also given cards on which the episodes were listed and relevant instructions summarised (lest they forgot) and were free to refer to them.

Table 5.1 Episodes in the Strange Situation

Episode	Time	Entrances and Exits
1. Mother, Child, Observer	30 seconds approx.	Observer leaves room.
2. Mother, Child.	3 minutes	Stranger enters the room.
3. Mother, Child, Stranger	3 minutes	Mother leaves the room.
4. Stranger, Child.	3 minutes*	Mother enters room, Stranger leaves.
5. Mother, Child again.	3 minutes	

* Episode is curtailed if the child is highly distressed or leaves the room and refuses to return.

There were five episodes (E) in the strange situation, as shown in Table 5.1, and they were as follows:

E1. Mother, Child, Observer

The observer showed the mother and child into the room, took their coats and put them aside. She then pointed out to the mother her chair, the magazine beside it and the location of the signal light bulb. Then she pointed out to the child his little chair and the toys around it, switched on the video recorder and left the room. This episode was not recorded.

E2. Mother, Child

The mother sat in her chair and pretended to be busy reading the magazine. She had been told that she could respond to the child if he sought a response from her, and to reassure him if needed, but that she was not to attract his attention.

E3. Mother, Child, Stranger

The stranger (female) entered the room, greeted the mother briefly and said "Hello X". (The mother had been instructed not to induce a response from the child). The stranger then took her seat and sat quietly.

After a minute had elapsed, she was signalled (light bulb) to chat with the mother. After another minute, she was signalled to invite the child's attention, gradually approaching him and attempting to engage him in interaction. In the meantime the mother sat quietly and talked only when the stranger talked to her.

E4. Stranger, Child

Another signal was given for the mother to leave the room, saying "I'll be back in a minute" (or 'sneaking out' as some mothers preferred), leaving her handbag behind and closing the door after her. The stranger then disengaged from interacting with the child, sat quietly in her chair, but responded to any advances made by the child. However, if the child was distressed at his mother's departure and/or attempted to leave the room, the stranger tried to distract him (by re-engaging his interest in the toys) and/or comforting him. If however the child did manage to open the door and leave the room, and the stranger was unable to get him to return or to comfort him successfully, the episode was curtailed.

E5. Mother, Child again

The mother opened the door, took a couple of steps into the room, then paused in the doorway while looking at the child (for him to make a spontaneous response), greeted him and went back to her chair.

The stranger then left the room.

The mother had been instructed to then behave naturally with her child, and play with him. Three minutes after the stranger's exit, the episode was terminated.

The child was never left alone in the experimental room.

As mentioned earlier, the same procedure involving the same five episodes was repeated when the sibling was four months old. In this second session, the baby was present and was held by the mother. The procedure was carried out

in the same room, with age-appropriate toys and in all cases but five, a different person served as the stranger.

When the mother left the room at the end of Episode 3 (Session II), she took the baby with her.

The following behavioural items were used for the analysis and they are defined as follows:

1. Exploratory Locomotion: All locomotion be it walking or crawling in the context of play or exploration and which was not:

- a) approaching or withdrawing from mother or stranger,
- b) following the mother when she left the room,
- c) random locomotion in the context of acute distress

(Ainsworth and Wittig 1969).

2. Exploratory manipulation: All manipulatory movements connected with playing with objects, e.g. fitting the pieces of a jig-saw, moving a toy car on the carpet, dressing a doll, banging and shaking objects. Not included were (after Ainsworth and Wittig, 1969):

- a) giving objects or taking away from mother or stranger,
- b) mere holding of toy objects,
- c) obviously angry throwing or pushing away,
- d) attempting to and/or succeeding in opening the door after mother.

The length of time a child spent playing with any single toy was not recorded, and although a note was made of the different toys the child played with, this information was not used in the analysis.

3. Looking: All looks directed at mother or stranger were scored. No distinction was made between a quick glance only, a continuous look or stare, or for example, looking followed by vocalisation. Looking at the environment, for example, looking around the room or at the toys was not included. Neither was looking at the baby in the post-birth session.
4. Show/Give: Instances of showing or giving play objects to mother or stranger were recorded. If showing or giving was preceded by looking, as it often was, then both looking and show/give were scored separately.
5. Distance: Distance from mother or stranger was assessed as close ($< 1\frac{1}{2}$ ft.), near ($1\frac{1}{2}$ -4 ft.) and far (> 4 ft.). Chalk was used to mark these distances on the carpet.
6. Responses to the stranger's entrance: Two responses by the children to the stranger entering the room were recorded. The first was looking at the stranger (as defined above). The second related to whether the child maintained the then physical distance between him and his mother, or sought proximity to her. For this response, the assessments of distance in terms of close, near and far were used.
7. Responses to mother's leaving the room: Three main types of responses were observed and their descriptions are largely based on Ainsworth's and Wittig's (1969).
 - a) "Regain" behaviour - "behavior indicative of a desire to regain the mother". (Ainsworth and Wittig 1969, p. 122). While these authors referred to "strong" and "weak" regain behaviour, "weak" regain behaviour was not defined. In this study however, a distinction was made and the behaviours described as follows:

- (i) Strong regain behaviour: Physically holding onto the mother as she departs from the room, or the child succeeding in opening the door and escaping from the room.
 - (ii) Weak regain behaviour: Attempting to follow the mother but successfully persuaded by her to stay, or successfully persuaded or distracted by the stranger. Also included were repeated calls for mother, but without crying.
- b) Crying: Two types of crying were distinguished:
- (i) Real crying, screaming.
 - (ii) Minimal crying, unhappy noises, cry-face.
- c) Acute Distress: The main behaviour that was considered as indicative of acute distress was loud, hard crying. Often this was accompanied by other behaviours like stamping of the feet, agitated wandering about in the room, trying to open the door; and in all a rather pitiful sight - at which point the episode was curtailed.
8. Responses to the mother's return: The immediate responses to the mother's return included looking up at mother, smiling or greeting, stopping crying, approaching, showing, clinging, ignoring mother's greeting and angry throwing of toy offered. Approaching included crawling or walking towards mother. Showing included showing of objects made or simply pointing out a toy object. The distinction between "tight" and "weak" clinging made by Ainsworth and Wittig (1969) was not adhered to and instead clinging included holding onto the mother or part of her clothing, sinking the face into mother's chest or lap, and wanting to be held and resisting being put down.

SCORING PROCEDURE

All scoring was done from the video records, and for all behavioural items except Distance, Responses to the stranger's entrance, Responses to mother leaving the room and Responses to mother's return; the method used was similar to that employed by Ainsworth and Wittig (1969). By this method, each 3 minute episode was divided into 15 second time segments. A behaviour was scored once if it occurred in any 15 second time segment. Thus the total frequency of any behavioural item was the number of 15 second time segments in which it appeared. Therefore a score of 12 would be given for any behaviour that occurred once in every 15 second time segment, or continuously throughout the 3 minutes. In instances where the episode was less than 3 minutes long, the frequency was prorated. If on the other hand an episode extended for longer than 3 minutes, the scoring was done on the first 3 minutes.

The distance score was computed differently. At the end of each 15 second interval in episodes 2, 4 and 5, it was noted whether the child was close, near or far from mother or stranger. A score of 1 was then assigned for close, 2 for near and 3 for far. Thus in a 3 minute episode, a child who remained close was assigned a distance score of 12, and one who stayed far a maximum score of 36. In this way individual distance scores were obtained for episodes 2, 4 and 5.

In episode 3 however, where the mother and stranger were present, these fine distinctions were not always possible. Therefore in this episode only, a percentage score was worked out to denote whether the child was nearer mother or nearer stranger.

Responses to stranger's entrance: Using the distance measures of close, near, far, it was possible to indicate whether a child moved for example, from far to close to mother or stayed near mother, when the stranger entered. This was all the information used for the pre-and post-birth comparisons.

Correlations with age were calculated using the weighted scores of 1-3 (close to far) and 4 for 'near stranger's chair'.

Using these weighted scores, it was possible to indicate an individual's shift in distance, and the direction. For example, far→close would be represented by -2, and close→near by +1.

Responses to mother leaving the room: Rather than analyse discrete behaviours e.g. weak regain, strong regain, minimal crying etc., a "response system" (Ainsworth, Bell and Stayton, 1971) was used. Ainsworth, Bell and Stayton (1971) have used "response systems" for previous discrete behaviours e.g. approach, greeting etc. on mother's return and it was felt here that this procedure was appropriate. Thus, by assigning a score of 1 each for minimal crying and weak regain, and a score of 2 each for real crying, strong regain, and acute distress, a 'distress score' or 'distress system' was calculated for each individual child. This ranged from 0 (no distress) to 6 (very highly distressed). Comparisons between pre- and post-birth sessions, and correlations with age were then done on these scores.

Responses to mother's return: Again, using the concept of a "response system" rather than discrete behaviours: smiling, greeting, approach etc. were classified as positive behaviours.

Ignoring mother's greeting, angry throwing of toy offered as negative behaviour. A score of +1 was then assigned for positive behaviours, -1 for negative behaviours, and 0 (neutral) for merely looking up at mother on her return. Correlations with age were then done on these scores.

RESULTS

Definitions

- Episode = Condition e.g. Episode 2 (Mother and child together)
- Session = Procedure involving all the conditions
- Session I = Procedure carried out before the birth of the sibling
- Session II = Procedure carried out after the birth of the sibling

The results are presented as follows:

- A Comparisons of similar episodes across sessions.
- B Comparisons between different episodes by session.
- C Age related findings within episodes and across sessions.
- D Individual variation.

A. Comparisons of similar Episodes across Sessions.

The results being presented here relate to Episodes 2, 3, 4 and 5, for the sessions before and after the birth. Comparisons involving the 'inter-episode' events of 'the stranger entering the room', 'the mother leaving the room', and 'the mother's return into the room', are presented in Section B.

Comparisons were based on the frequencies of the behavioural items considered, and to test for statistical significance, a two-tailed sign test was used. Table 5.2 presents the results of comparisons between the same episodes across the two sessions. As can be seen, none of the comparisons are significant. This indicates that the group of children studied here did not behave significantly differently in terms of locomotion, manipulation, looking, showing/giving and distance, in similar episodes after the birth of the sibling compared to before the birth.

However, some of the non-significant comparisons, involving a greater imbalance (based on the number of children) between the two sessions deserve mention.

There was a tendency for the children to locomote and to look at the mother in Episode 2, more before the birth than after. The former suggests that in this initial episode with mother, the children may have been slightly more confident or experienced a greater sense of security. Looking at the mother, is however open to a number of interpretations. It could be that the children were engaging in 'friendly contact', seeking reassurance, or merely 'keeping a tab on' mother who appeared to be engrossed in reading a magazine.

After the birth, there were strong trends for the children to locomote in the stranger's presence (Episode 3), and to maintain greater physical distance from the mother in Episode 5. Now both of these could have been partly due to the fact that the children were older. Thus they would have been less disturbed by the stranger's entrance and therefore explored more than they had done before the birth.

Table 5.2 Comparisons of Episodes across Sessions

(Two-tailed Sign Test)

Exploratory Locomotion

Episode 2:	Pre-birth	>	Post-birth	ns.	(10 vs 5)
Episode 3:	Pre-birth	<	Post-birth	ns.	(4 vs 11)
Episode 4:	Pre-birth	<	Post-birth	ns.	(5 vs 7)
Episode 5:	Pre-birth	≈	Post-birth	ns.	(8 vs 8)

Exploratory Manipulation

Episode 2:	Pre-birth	<	Post-birth	ns.	(4 vs 7)
Episode 3:	Pre-birth	≈	Post-birth	ns.	(7 vs 7)
Episode 4:	Pre-birth	<	Post-birth	ns.	(5 vs 8)
Episode 5:	Pre-birth	>	Post-birth	ns.	(9 vs 8)

Looking

Mother in Episode 2:	Pre-birth	>	Post-birth	ns.	(10 vs 6)
Mother in Episode 3:	Pre-birth	≈	Post-birth	ns.	(7 vs 7)
Mother in Episode 5:	Pre-birth	>	Post-birth	ns.	(9 vs 8)
Stranger in Episode 3:	Pre-birth	<	Post-birth	ns.	(6 vs 8)
Stranger in Episode 4:	Pre-birth	≈	Post-birth	ns.	(7 vs 7)

Show/Give

Mother in Episode 2:	Pre-birth	>	Post birth	ns.	(9 vs 7)
Mother in Episode 3:	Pre-birth	>	Post-birth	ns.	(8 vs 3)
Mother in Episode 5:	Pre-birth	>	Post-birth	ns.	(8 vs 4)
Stranger in Episode 3:	Pre-birth	>	Post-birth	ns.	(4 vs 2)
Stranger in Episode 4:	Pre-birth	>	Post-birth	ns.	(8 vs 5)

Distance

From Mother in					
Episode 2:	Pre-birth	<	Post-birth	ns.	(8 vs 9)
From Mother in					
Episode 3:	Pre-birth	≈	Post-birth	ns.	(7 vs 7)
From Stranger in					
Episode 3:	Pre-birth	≈	Post-birth	ns.	(7 vs 7)
From Stranger in					
Episode 4:	Pre-birth	≈	Post-birth	ns.	(6 vs 6)
From Mother in					
Episode 5:	Pre-birth	<	Post-birth	ns.	(5 vs 11)

Note: The figures in brackets represent the number of children showing the behaviour in the indicated direction.

Episode 2 - Mother, Child
 Episode 3 - Mother, Child, Stranger
 Episode 4 - Child, Stranger
 Episode 5 - Mother, Child again

In relation to the distance they maintained from the mother on her return (Episode 5), again it could be argued that being older, they were less disturbed by both the separation and being alone with the stranger in the preceding Episode 4. Therefore, when the mother returned they had no need for proximity and were comfortable at a distance from her. But then the baby was four months old at this time, and was physically present at this session, so the distance the children maintained may have had little to do with age, but rather with the changed nature of the attachment between them and their mothers.

Summary:

The children studied here did not behave significantly differently in terms of locomotion, manipulation, looking, showing/giving and distance when similar episodes were compared for before and after the birth of the sibling. However, examination of these results, weakly suggested that the children were more secure with mother alone before the birth, and after the birth were less disturbed by the stranger.

In the next section (B) the validity of these suggestions is examined.

B. Comparisons between different Episodes by Session

1. Most of this section deals with comparisons of different episodes (one with the other), for each session, and for each behavioural item in turn.
2. Also included are the 'inter-episode' events (e.g. 'response to stranger entering the room'), and these are

compared only in terms of before and after birth.

1. Comparisons were based on the frequencies of behavioural items, and a Two-tailed Sign test was used to test for statistical significance.

Table 5.3

Exploratory Locomotion

<u>Pre-birth</u>		<u>Post-birth</u>	
E2 > E3	p = .012 (14 vs 3)	E2 > E3	ns. (11 vs 5)
E2 > E4	p = .008 (13 vs 2)	E2 > E4	p < .002 (16 vs 1)
E2 > E5	p < .004 (15 vs 1)	E2 > E5	ns. (12 vs 5)
E3 > E4	ns. (9 vs 3)	E3 > E4	ns. (11 vs 4)
E5 > E3	ns. (10 vs 6)	E3 > E5	ns. (7 vs 6)
E5 > E4	ns. (10 vs 5)	E5 > E4	p = .036 (12 vs 3)

Episodes (E)

E2 = Mother, Child

E3 = Mother, Child, Stranger

E4 = Child, Stranger

E5 = Mother, Child again.

Exploratory Locomotion

Before the birth of the sibling and when the children were alone with their mothers in Episode 2, they moved about and explored the strange room significantly more than they did in any other episode (see Table 5.3). After the birth, there was still a tendency for them to explore more in the initial episode with mother, compared to subsequent episodes

but the presence of the stranger in Episode 3 and the separation preceding Episode 5, did not significantly affect exploration in this session. However, being alone with the stranger (Episode 4), strongly inhibited locomotion after the birth, as before the birth, compared to being alone with mother (Episode 2).

Both before and after the birth, the presence of the mother reduced the disturbing effect of the stranger ($E3 > E4$), but not significantly. The presence of the stranger tended to be more disturbing than the separation before the birth ($E5 > E3$, $E5 > E4$), and after the birth this was significantly so in the episode involving the stranger alone ($E5 > E4$).

Summary:

Before the birth of the sibling, the children were significantly more secure in the initial episode with mother compared to any other episode. After the birth, this security in the presence of mother alone was significantly evident only in comparison with episodes during which the children were alone with the stranger ($E2 > E4$, $E5 > E4$). The tendency for mother's presence to reduce the anxiety caused by the stranger's presence however, even after the children had experienced an upsetting separation from their mothers, was observed both before and after the birth.

Exploratory Manipulation

Perhaps the most striking feature of the results on exploratory manipulation was that no one finding was significant

for both before and after the birth, although the trends were broadly similar in both sessions (see Table 5.4). Before the birth, the children played with objects in every episode during which mother was present, significantly more than when they were alone with the stranger ($E2 > E4$, $E3 > E4$, $E5 > E4$).

Table 5.4

Exploratory Manipulation

<u>Pre-birth</u>	<u>Post-birth</u>
$E2 > E3$ ns. ($p = .058$) (11 vs 3)	$E2 > E3$ $p = .022$ (11 vs 2)
$E2 > E4$ $p = .022$ (11 vs 2)	$E2 > E4$ ns. (10 vs 4)
$E2 > E5$ ns. (9 vs 5)	$E2 < E5$ ns (6 vs 6)
$E3 > E4$ $p = .036$ (12 vs 3)	$E4 > E3$ ns. (8 vs 7)
$E5 > E3$ ns. (8 vs 4)	$E5 > E3$ ns. (10 vs 4)
$E5 > E4$ $p = .004$ (14 vs 2)	$E5 > E4$ ns. (9 vs 5)

After the birth, being alone with the stranger did not upset their play significantly, compared to being alone with mother initially and on her return. Further, there was hardly any difference between playing in the presence of both mother and stranger, and stranger alone.

Possible reasons for the disappearance of these significant differences after the birth could be to do with age and/or the previous experience in the 'strange situation'. The children were 6 months older in the post-birth session, it was the second time they had been in the 'strange room' and perhaps strange persons were no longer upsetting. Apart from age which will be dealt with in the next section (C), familiarity with the situation and being at ease with strange persons

are not supported by the results on exploratory locomotion. In the post-birth session, when the children were alone with the stranger, locomotion was significantly disturbed compared to when they were with mother, both in Episodes 2 and 5. But then, it is possible that actively moving around may be more inhibited when alone with the stranger compared to sitting in the one spot and manipulating. However, this discussion will be postponed, and continued in the light of the rest of the findings which are still to be presented.

The only significant difference in manipulation between two conditions after the birth, was to play more in the preceding episode with mother than in the subsequent episode when the stranger was on the scene ($E2 > E3$). This was almost significant before the birth ($p = .058$).

The effect of separation on play was not so apparent. Comparisons of Episodes 2 and 5, and also Episodes 5 and 3 yielded no significant differences in both sessions. Similar results were obtained for exploratory locomotion, except for the one finding that children engaged in exploratory locomotion more in the episode with mother before separation ($E2 > E5$), and before birth.

Summary:

Before the birth, the mother's presence facilitated play in all three episodes during which she was present, compared to when the children were alone with the stranger. This reflects security in the mother's presence and discomfort when alone with the stranger. After the birth, these significant

differences were not maintained, and although age was considered a possible factor, familiarity with the 'strange situation' was not.

In general, and significance apart, the trends obtained for exploratory manipulation and exploratory locomotion are very similar, both before and after the birth; however, the stranger's presence appears to have been much more upsetting on both behaviours before than after the birth.

Looking

Table 5.5

Looking

<u>Pre-birth</u>			<u>Post-birth</u>		
ME2 > ME3	p = .036	(12 vs 3)	ME2 > ME3	p = .012	(12 vs 2)
ME5 > ME2	ns.	(8 vs 7)	ME2 > ME5	ns.	(7 vs 6)
ME5 > ME3	p < .008	(14 vs 1)	ME5 > ME3	ns.	(11 vs 4)
SE3 > ME3	p < .004	(16 vs 0)	SE3 > ME3	p < .002	(14 vs 0)
SE3 > SE4	ns.	(10 vs 7)	SE3 > SE4	ns.	(8 vs 7)
SE4 > ME2	ns.	(10 vs 7)	SE4 > ME2	ns.	(12 vs 5)
SE4 > ME5	ns.	(10 vs 6)	SE4 > ME5	ns.	(10 vs 6)

ME2 = Looking at Mother in Episode 2

ME3 = Looking at Mother in Episode 3

ME5 = Looking at Mother in Episode 5

SE3 = Looking at Stranger in Episode 3

SE4 = Looking at Stranger in Episode 4

An overall examination of Table 5.5 shows that, although the trends for looking are largely similar between the two sessions, they are now very different from those obtained for locomotion and manipulation. For instance, all the significant results in looking involve comparisons with Episode 3. The difference between looking on one hand, and locomotion and manipulation on the other, does not however stop at the trends obtained here. When children engage in play, be it actively exploring their environment or manipulating toy objects, a fairly accurate statement about their well-being can be made. "The sick, bewildered, frightened child does not . . . play" (Garvey 1977, p. 28).

Looking however, is not so easy to interpret. A child may look at mother while talking to her, for reassurance, or simply to check if she is attending. Similarly, a child may look at the stranger, again while talking to her, out of curiosity or even apprehension. It is against this background that interpretation of the results will be attempted.

Both before and after the birth, when both mother and stranger were present in Episode 3, the stranger was looked at significantly more than the mother. This may be expected since the stranger was a novel object. Further, it is known that, depending on the degree of strangeness and other situational variables, novel objects can elicit fear and withdrawal or approach and exploration. It is suggested therefore, that in looking at the stranger more than the mother, the children were engaging in visual exploration of a 'strange object' in the safety of mother's presence. A possible

explanation on why this visual exploration of the stranger was consistently significant (in both sessions) has been put forward by Maccoby and Feldman (1972). (See * page 156.)

Another finding that was significant before and after the birth, was that children looked at their mothers more when alone with them than in the presence of the stranger (ME2 > ME3). It is proposed that looking at the mother in these two episodes carries different meanings. The results on locomotion and manipulation broadly indicated that the children were generally most secure in Episode 2, and therefore looking at the mother in this episode was in the context of security. In Episode 3 the children were possibly seeking reassurance.

In comparisons involving episodes where one adult is present in the one episode, and two adults in the other (e.g. Episodes 2 and 3), it could be suggested that a finding like the one already mentioned, showing that children looked more at mother in Episode 2 than in Episode 3, may be an artefact produced simply by split attention. This could be, but the results on looking are thought to have been determined more by the identity of the adults rather than the number present. Table 5.6 may help clarify this point. It presents comparisons involving the stranger in Episode 3 - the only episode in which two adults were present.

Table 5.6 Comparisons of episodes with one or two adults present

<u>Pre-birth</u>		<u>Post-birth</u>	
(a) SE3 > ME3	p < .004 (16 vs 0)	SE3 > ME3	p < .002 (14 vs 0)
(b) SE3 > SE4	ns. (10 vs 7)	SE3 > SE4	ns. (8 vs 7)
(c) SE3 > ME2	ns. (11 vs 4)	SE3 > ME2	p = .036 (12 vs 3)
(d) SE3 > ME5	ns. (8 vs 4)	SE3 > ME5	p = .022 (11 vs 2)

SE3 = Looking at Stranger in Episode 3

ME3 = Looking at Mother in Episode 3

SE4 = Looking at Stranger in Episode 4

ME2 = Looking at Mother in Episode 2

ME5 = Looking at Mother in Episode 5

(a) also presented in Table 5.5 and mentioned earlier (page 115), shows that when both mother and stranger were present, they were not looked at equally frequently.

(b) also presented in Table 5.5, together with (c) and (d) not earlier presented, show that the trend to look more at the stranger in Episode 3, where 'sharing' of looking may be expected is consistently greater than looking at the stranger when alone with her (E4), and at mother when alone with her (E2, E5). The comparisons involving mother alone (c, d) are significant after the birth.

Since the comparisons involving the stranger in Episode 3 and the other episodes, do not support the idea of split attention, there is no reason to suppose that the comparisons involving the mother in Episode 3 and the other episodes should.

It is therefore maintained that for looking the identity of the adult(s) in the particular episodes determined the results more than the number present.

Comparisons of episodes involving the child and the mother versus the child and the stranger, although not significant indicate that the stranger is looked at more than the mother (SE4 > ME2, SE4 > ME5), both before and after the birth. This suggests that this measure is no longer reflecting security of the child, but curiosity of and perhaps fear of the stranger. It is unlikely that looking in the process of interacting with the stranger contributed appreciably to these trends. The few children who appeared fairly happy while interacting with the stranger in Episode 4, also tended to look at her more than they did while interacting with their own mothers. It is therefore reasonable to assume that even for these children, looking at the stranger must have included an element of uneasiness.

Looking at the mother in the initial episode with her (E2), compared to the episode after her return (E5) was not significantly different in the two sessions. However, after her return the mother was looked at significantly more than when the stranger had been present (ME5 > ME3) before birth. This may mean that the children were more at ease and therefore interacting with their mothers more than when the stranger had been present, but alternatively this may reflect a certain degree of suspicion and mistrust of a mother who had earlier suddenly left the room. In any case, this finding was not significant after the birth although the trend was maintained.

Summary:

Both before and after the birth, the stranger was looked at significantly more than the mother when both were present. It was suggested that in looking at the stranger, the children were visually exploring a 'strange object' in the security of mother's presence.

The children looked at their mothers more when alone with them than in the presence of the stranger in both sessions (ME2 > ME3). That two adults were present in Episode 3 and one in Episode 2 was not thought to have determined this finding.

Non-significant trends indicating that the stranger was looked at more than the mother, when the children were alone with either, suggested that curiosity of and perhaps fear of the stranger was reflected in this measure, rather than security of the child. Looking at the mother when alone with her was not significantly different in both sessions, but after her return and in the pre-birth session, she was looked at significantly more than when the stranger had been present.

Show/Give

The trends for show/give (Table 5.7) resemble those of exploratory locomotion and exploratory manipulation in that Episode 2 is usually uppermost in relation to the other episodes. However, the trends are also similar to those for looking in that in both measures the significant results involve comparisons with Episode 3.

Table 5.7

Show/Give

Pre-birth		Post-birth	
ME2 > ME3	p = .022 (13 vs 3)	ME2 > ME3	p < .008 (15 vs 0)
ME2 > ME5	ns. (11 vs 3)	ME2 > ME5	ns. (9 vs 2)
ME5 > ME3	ns. (7 vs 6)	ME5 > ME3	p = .008 (8 vs 0)
ME3 > SE3	ns. (6 vs 5)	SE3 > ME3	ns. (5 vs 2)
SE4 > SE3	p = .038 (10 vs 2)	SE4 > SE3	ns. (6 vs 3)
ME2 > SE4	ns. (9 vs 4)	ME2 > SE4	ns. (8 vs 4)
SE4 > ME5	ns. (7 vs 7)	SE4 > ME5	ns. (7 vs 5)

- ME2 = Show/give to Mother in Episode 2
- ME3 = Show/give to Mother in Episode 3
- ME5 = Show/give to Mother in Episode 5
- SE3 = Show/give to Stranger in Episode 3
- SE4 = Show/give to Stranger in Episode 4

The only result that was significant both before and after the birth, was that the children showed or gave objects to mother when alone with her more than when the stranger was present (ME2> ME3). After her return (E5), there was a tendency to show as much as when the stranger had been present before the birth, and although more children showed on mother's return compared to when the stranger was present after the birth (8 vs 0) and this was significant; an equal number of children (8) did not show in either episode, and one child showed equally in both.

When the children were alone with the stranger they also

tended to show and give objects to her, more than when both mother and stranger were present ($SE4 > SE3$). This was significant only before the birth and not after.

It appears therefore, that in all these significant findings the children show/give more when they are alone with mother or stranger rather than with both together. This may be because when mother and stranger are both present, showing and giving is 'shared' between them. The number of children (6 vs 5) reflected in the pre-birth trend ($ME3 > SE3$) supports this explanation. After the birth however 'sharing' was not in evidence, and the trend was reversed. This reversal though was based on about half the number of children, with the other half not showing or giving either to mother or to stranger in Episode 3.

Showing/giving to mother before separation ($ME2 > ME5$) was almost significant before birth ($p = .058$) but less so after birth ($p = .066$). There was a non-significant tendency to show mother when alone with her more than to the stranger in similar circumstances ($ME2 > SE4$), in both sessions. However, the children showed/gave to the stranger when alone with her as often as to mother on her return both before and after the birth. In performing these acts more or equally to the stranger than/as to the mother when alone with either, it is thought these behaviours serve a placating function to the stranger, and a friendly one to the mother.

Summary:

The only significant results that were obtained, involved

comparisons between episodes where the children were either alone with mother or the stranger, and Episode 3. Unlike looking in Episode 3, there was some indication of show/give being 'shared' between mother and stranger before birth, but not after.

Showing/giving mother when alone with her, and to the stranger in similar circumstances, compared to the two together (Episode 3), was significant in both sessions for the mother, and only before birth for the stranger. Although there was a non-significant tendency to show more to mother when alone with her before separation, compared to being alone with the stranger, there was also a tendency to show both equally when Episodes 4 and 5 were compared. The significant and non significant trends, indicating that the child shows/gives more or equally to mother than/as to the stranger when alone with either, imply that these acts may have an appeasing function to the stranger and a friendly one to the mother.

Distance Score

As Table 5.8 shows, the same trends were obtained for the distance score before and after the birth. One of these, was a tendency for the children to maintain a greater distance from their mothers in Episode 2 compared to Episode 5.

Although this tendency was stronger before than after the birth, being further from mother in Episode 2 is likely to have been related to more of a tendency to explore, and therefore greater security than after separation (Episode 5).

Table 5.8Distance Score

<u>Pre-birth</u>			<u>Post-birth</u>		
ME2 > ME5	ns.	(12 vs 5)	ME2 > ME5	ns.	(8 vs 6)
SE4 > ME2	ns.	(10 vs 7)	SE4 > ME2	ns.	(9 vs 6)
SE4 > ME5	p = .022	(13 vs 3)	SE4 > ME5	p = .05	(13 vs 4)
E3FS > E3FM	p = .002	(15 vs 2)	E3FS > E3FM	p = .004	(14 vs 2)

ME2 > ME5 = Further from Mother in Episode 2 than from her in Episode 5

SE4 > ME2 = Further from Stranger in Episode 4 than from Mother in Episode 2

SE4 > ME5 = Further from Stranger in Episode 4 than from Mother in Episode 5

E3FS > E3FM = Further from Stranger in Episode 3 than from Mother in Episode 3

When the children were alone with the stranger in both sessions, they tended to remain further from her than they had been from mother before separation, but not significantly so. In the presence of both mother and stranger, the children remained significantly further from the stranger than from mother (E3FS > E3FM), and when left alone with the stranger they maintained a significantly greater distance from her, than they did from mother on her return (SE4 > ME5) in both sessions. Unlike the distance maintained from the mother, that from the stranger is likely to have been coupled with fear and suspicion of the stranger and general insecurity in her presence.

Summary:

The distance the children maintained from their mothers when alone with them was not significantly different in the two sessions, although there was a tendency to be further in Episode 2 than 5. When alone with the stranger, there was a tendency to be further from her than from the mother, and this was significant in the comparison after mother's return (Episode 5); and with both mother and stranger together (Episode 3).

2. "Inter-episode" events:Responses to the stranger entering the room

Both before and after the birth of the sibling, all the children looked up as the door opened and the stranger entered. Although the duration of looks was not recorded, most children continued to look as the stranger sat down on her chair and a few stared.

Table 5.9

	<u>Pre-birth</u>	<u>Post-birth</u>
<u>Close</u> to Mother when Stranger entered and stayed	4	0
<u>Near</u> to Mother when Stranger entered and stayed	6	12
Near Stranger's chair and stayed	2	1
Moved <u>near</u> to Mother from <u>far</u>	2	3
Moved <u>close</u> to Mother from <u>far</u>	2	0
Moved <u>close</u> to Mother from <u>near</u>	1	1

Note: Figures represent number of children

Table 5.9 presents the numbers of children who were at specified distances from the mother when the stranger entered, and maintained those distances; as well as those who moved nearer to the mother after the stranger appeared; for both sessions.

As can be seen, 10 and 12 out of the 17 children were already close to or near to mother and stayed, after the stranger entered before and after the birth respectively. Of the five children who immediately moved nearer to mother in the pre-birth session, the two girls, Marian and Charity, who moved from far to close, and the one boy, Jimmy, who moved from near to close, appear to have been most disturbed by the stranger's entrance. After the birth, four children moved nearer to mother when the stranger entered, and the most 'insecure' move was again by Jimmy, from near to close.

Before and after the birth, Caroline, Philip, and Luke respectively, had positioned themselves near the stranger's chair and all stayed there after the stranger entered. This reflects a high degree of confidence. One of the two, Philip, had immediately been very friendly towards the stranger, pointing out to her the picture of the "Magic Roundabout" on the wall, and before the end of the first minute was happily chatting to her.

Overall there was a tendency for the children as a group to be slightly further from the mother when the stranger entered in the post-birth session compared to the pre-birth (9 vs 3), but this was not significant. Further, there were no sex differences among the children who were already close

to and near mother when the stranger entered, nor those who moved nearer mother, in both sessions.

Table 5.10 Responses to Mother leaving the room

		<u>Pre-birth</u>	<u>Post-birth</u>
Very highly distressed	(5 - 6)	4	2
Considerably distressed	(3 - 4)	2	1
Slightly anxious	(1 - 2)	6	0
Not distressed	(0)	5	14

Note: The figures in brackets represent the 'distress score'

Table 5.10 presents the number of children classified according to the degree of distress shown on mother's leaving the room. The classification ranges from those who did not show distress (i.e. no regain, no crying) to those who became very upset (i.e. strong regain, real crying, acute distress).

As can be seen, before the birth about a quarter of the children were highly distressed, another quarter did not appear at all upset, and about half the children were in the 'slightly' to 'considerably' upset range. Overall then, there was a non-significant tendency for children to get upset (12 vs 5) when the mother left the room in the pre-birth session. After the birth however, only two children (Jimmy and Penny) were highly distressed when their mothers left the room. Of the 17 children, 14 did not appear upset, did not even attempt to follow mother nor ask to go with her. Thus in the post-birth session there was a significant absence of distress (14 vs 3; $p = .012$). Part of the reason for the children not being

overtly anxious and upset in the post-birth session, must be age. In the pre-birth session, the strongest reactions in the group were shown by children up to about two years of age. In the post-birth session, only three children (Jimmy and Penny amongst them), were less than two years of age, and therefore most of the sample were beyond the age at which a strong reaction had been obtained.

The one child who was considerably upset in the post-birth session, and the only one who would not separate from her mother was Charity (see Individual differences, page 149-150). Four children showed no regain behaviour nor crying in both sessions. They were Timothy (25.75 months); Jane (26.75 months); Luke (34.5 months) and Caroline (37 months). (Ages given at pre-birth session.)

Table 5.11

Responses to Mother's Return

	<u>Pre-birth</u>	<u>Post-birth</u>
Look up at Mother + positive behaviour	8	4
Look up at Mother + negative behaviour	2	0
Look up at Mother only	2	10 p=.038
Came in with Mother or Mother recalled	5	3

Positive behaviour e.g. Smile, Greet, Approach, Show, Cling

Negative behaviour e.g. Ignore Mother's greeting, appear to avoid eye-contact, angry throwing of toy offered.

Apart from the eight children in both sessions who either having escaped from the room came back in with their mothers, or had the episode curtailed and their mothers recalled, the

rest looked up as their mothers returned. Apart from this acknowledgement, about half of the sample also smiled at or greeted their mothers, approached them and pointed out a toy or something that they had made. Fewer children engaged in these positive behaviours after the birth, but the difference was not significant. What was significantly different was that in the post-birth session, more children looked up at their mothers and then immediately continued to play or talk to the stranger. In a way they seemed to just ignore their mothers. It has been suggested (e.g. Bowlby, 1971) that in children older than three years, proximity to mother is not crucial. This would explain why some of the children did not approach the mother on her return in the post-birth session. However, only five out of the ten who merely looked at their mothers were older than three years, but more importantly, all ten could have smiled at or greeted their mothers or even showed an object from a distance. This they did not do, and it is suggested that it was the disturbance in the attachment that gave rise to the post-birth result.

Only two children (Peter and Morag) reacted negatively to their mothers' return in the pre-birth session. Peter appeared to be avoiding eye-contact with his mother during Episode 5, and when he was offered a toy, accepted and then threw it down. Morag ignored her mother's greeting, and as her mother sat down, Morag thrust a 'ball' onto her lap. She then proceeded to insert shapes (triangles, squares) into the 'ball', but when she dropped the third shape onto the floor she picked up the ball from her mother's lap and angrily

threw it on the floor. She could of course merely have been angry at her own failure in inserting the shape.

Finally it should be mentioned that two children, Caroline and Martin, only looked at their mothers in both sessions. Each time when their mothers returned, they continued to talk to the stranger and did not engage in any positive behaviour towards their mothers.

C. Age related findings within Episodes and across Sessions Results

- (i) Figs. 5.2 to 5.6 show linear regression lines for Sessions I and II (i.e. before and after the birth respectively).
- (ii) Table 5.12 shows the correlation coefficients for the linear regression lines in Figs. 5.2 to 5.6, and their levels of significance.
- (iii) The correlation coefficients, their levels of significance and slopes of the regression lines are integrated for some measures in the following presentation.

1) Exploratory Locomotion

Before the birth of the sibling (see Session I), locomotion significantly decreased with age in the presence of mother alone both in Episodes 2 and 5. After the birth, however, there were tendencies for the younger children to show a reduction in locomotion (Episode 2) and for the older to show an increase in both episodes (see Fig. 5.2). This resulted in a levelling of the post-birth trends, and the disruption of the previous significant age relationships.

Table 5.12 Correlations between age and scores - within Episodes
and between sessions (Spearman's 2 tailed)

Exploratory Locomotion

	Session I		Session II	
E2	-.65	$p < .01$	-.03	ns.
E3	.06	ns.	.19	ns.
E4	.15	ns.	-.09	ns.
E5	-.76	$p < .001$	-.04	ns.

Exploratory Manipulation

	Session I		Session II	
E2	.46	ns.	.24	ns.
E3	.76	$p < .001$.20	ns.
E4	.65	$p < .01$.19	ns.
E5	.52	$p < .05$.25	ns.

Looking

	Session I		Session II	
ME2	-.09	ns.	-.65	$p < .01$
ME3	-.04	ns.	-.45	ns.
ME5	-.17	ns.	-.31	ns.
SE3	.11	ns.	-.56	$p < .02$
SE4	.65	$p < .01$	-.10	ns.

Show/Give

	Session I		Session II	
ME2	-.27	ns.	-.61	$p < .01$
ME3	.13	ns.	-.48	ns.
ME5	-.18	ns.	-.18	ns.
SE3	-.14	ns.	-.31	ns.
SE4	.54	$p < .05$	-.28	ns.

Distance Score

	Session I		Session II	
E2	.25	ns.	.19	ns.
E3 M	.63	$p < .01$.17	ns.
E3 S	-.71	$p < .01$	-.23	ns.
E4	-.70	$p < .01$	-.18	ns.
*E4	-.49	ns.	-.20	ns.
E5	-.22	ns.	.14	ns.

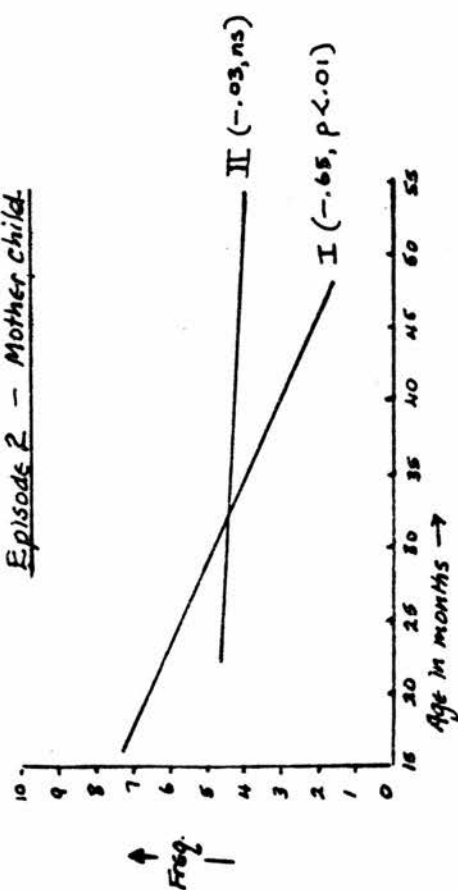
* N = 14

Positive correlation = More distant with age (e.g. from Mother in Episode 2)

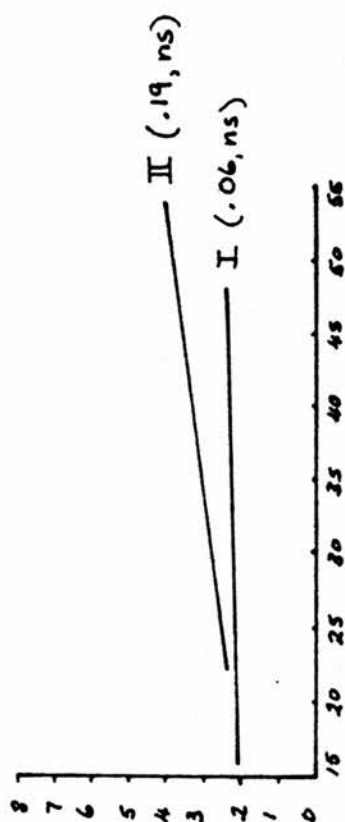
Negative correlation = Less distant with age (e.g. from Stranger in Episode 4)

FIG 5.2 Exploratory Locomotion

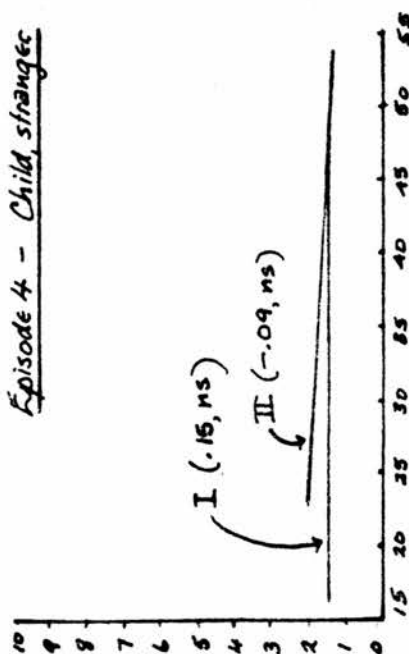
Episode 2 - Mother child



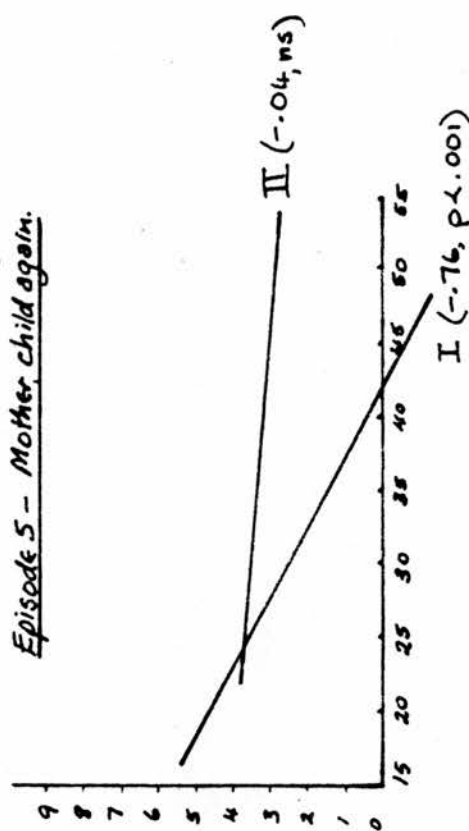
Episode 3 - Mother child stranger



Episode 4 - Child, stranger



Episode 5 - Mother child again



Note: I = Pre-birth session; II = Post-birth session.
For each regression line, the correlation coefficient and its level of significance is indicated.

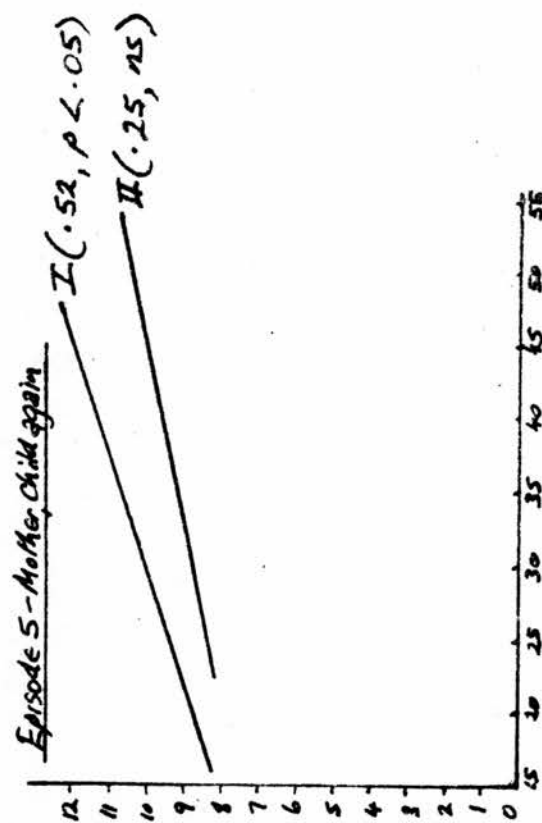
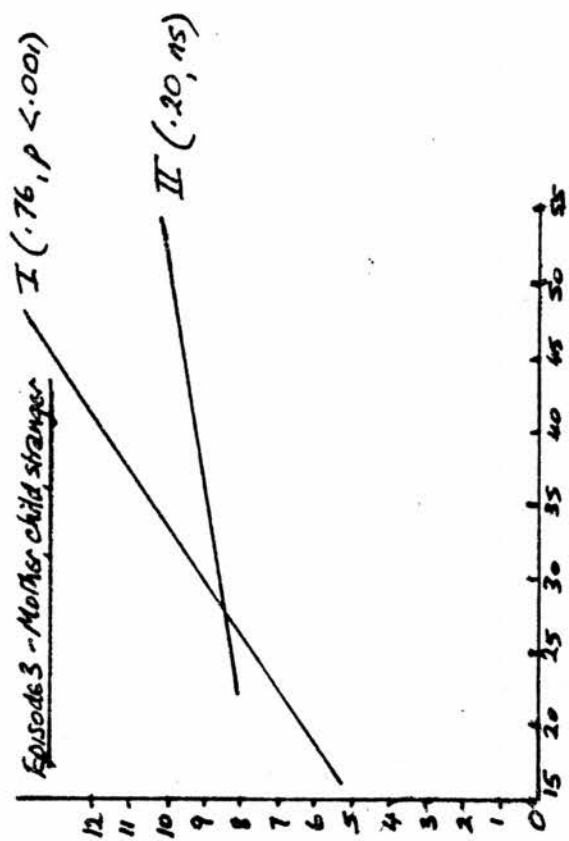
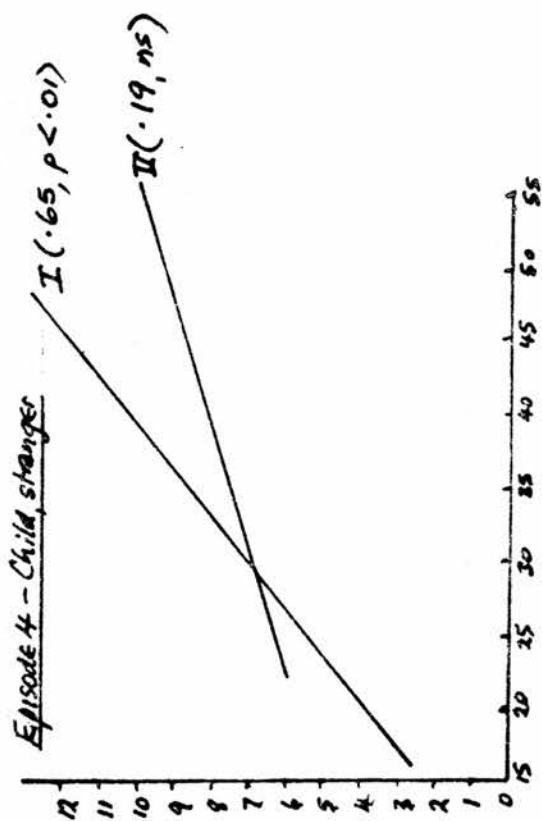
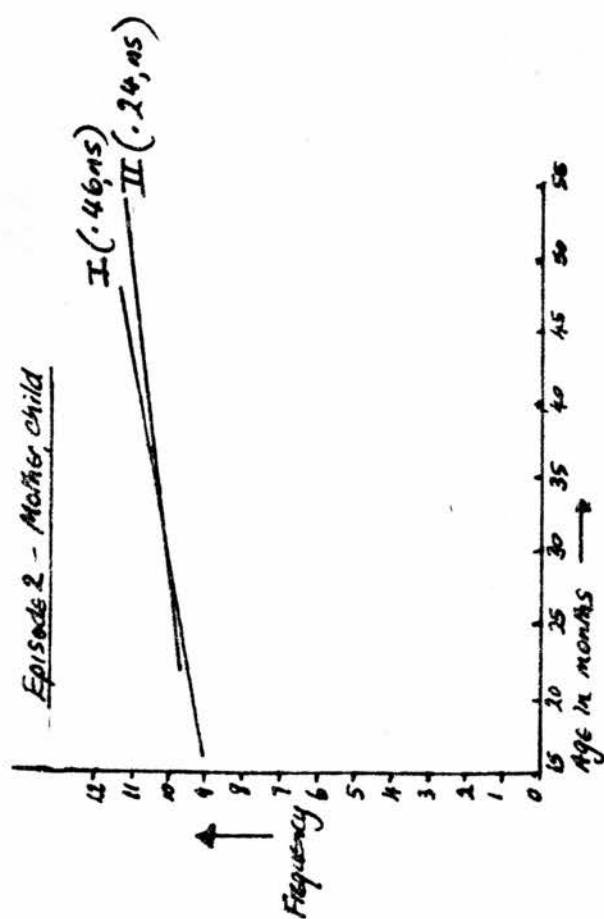
Locomotion in the presence of the mother and the stranger in Episode 3, and when the children were alone with the stranger in Episode 4 was not significantly related to age before or after the birth of the sibling.

It appears therefore, that an effect of the birth of the sibling is to disrupt the pre-birth age trend of reduction of exploratory locomotion with age, and that in this case the disruption occurs mainly in the older children - they behaved under these circumstances as though they were much younger than they really were, with the least effect at about the age of 25 to 30 months at their sibling's birth.

2) Exploratory Manipulation

Both before and after the birth of the sibling, exploratory manipulation was positively related to age in all episodes (see Table 5.12), although not all were significant. Before the birth, with both the mother and the stranger in Episode 3, when alone with the stranger in Episode 4 and with the mother again in Episode 5 the children manipulated objects significantly more with age. However, after the birth, and possibly due to the baby's presence in Session II, the normal growth of manipulation with age was upset. There was a general trend toward reduction in manipulation in most children, but as in exploratory locomotion the disturbance appears to have been more marked in the older children (see Fig. 5.3). The presence of the stranger in the post-birth session (Episodes 3 and 4) did not however alter the age relationships (which were very weak).

FIG 5.3 Exploratory Manipulation



The pattern then, is very similar to that for exploratory locomotion, with the exception that the age trend was positive. Again, the least affected age was 25 to 30 months.

3) Looking

Before the birth, looking at the mother in the three episodes in which she was present, was not related to age. Indeed the flat trends obtained in these episodes (Session I) are clearly illustrated in Fig. 5.4. The only strong trend with age in Session I was positive, and occurred in Episode 4 when the children were with the stranger. The reason for this may have been that the older children having stayed in the room with the stranger, were more prepared to be friendly and interact with the stranger. In so doing they looked at her more. After the birth, however, this tendency was no longer present and the older children did not behave differently with the stranger compared to the younger children.

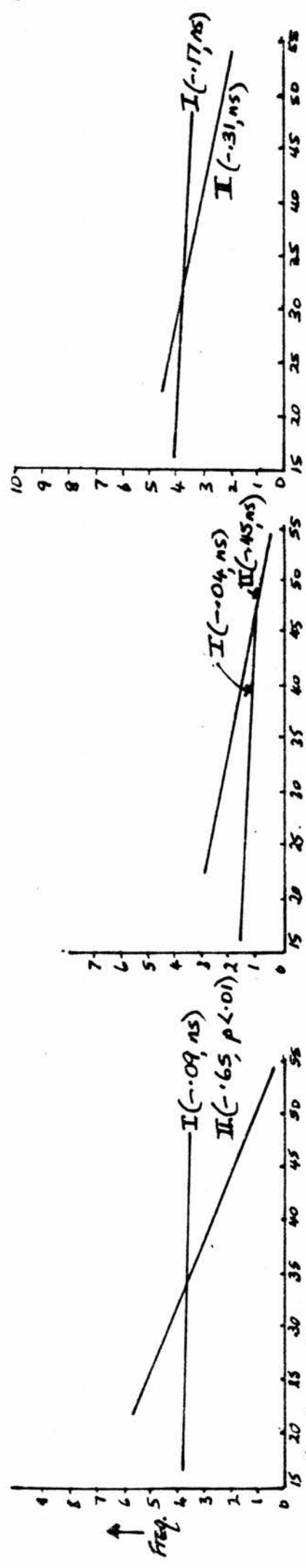
Except for Episode 4 in which the correlation was very low, the general tendency in the other episodes of Session II, was for looking to decrease with age. This was significant for the mother in Episode 2 and the stranger in Episode 3. The general tendency seems mainly to be an effect on the older children; they tend both to look less at mother in Episode 2 and at the stranger in Episode 4. Thus the children looked less, and showed less exploratory manipulation in the presence of the stranger.

FIG 5.4 Looking at:

Mother in Episode 5

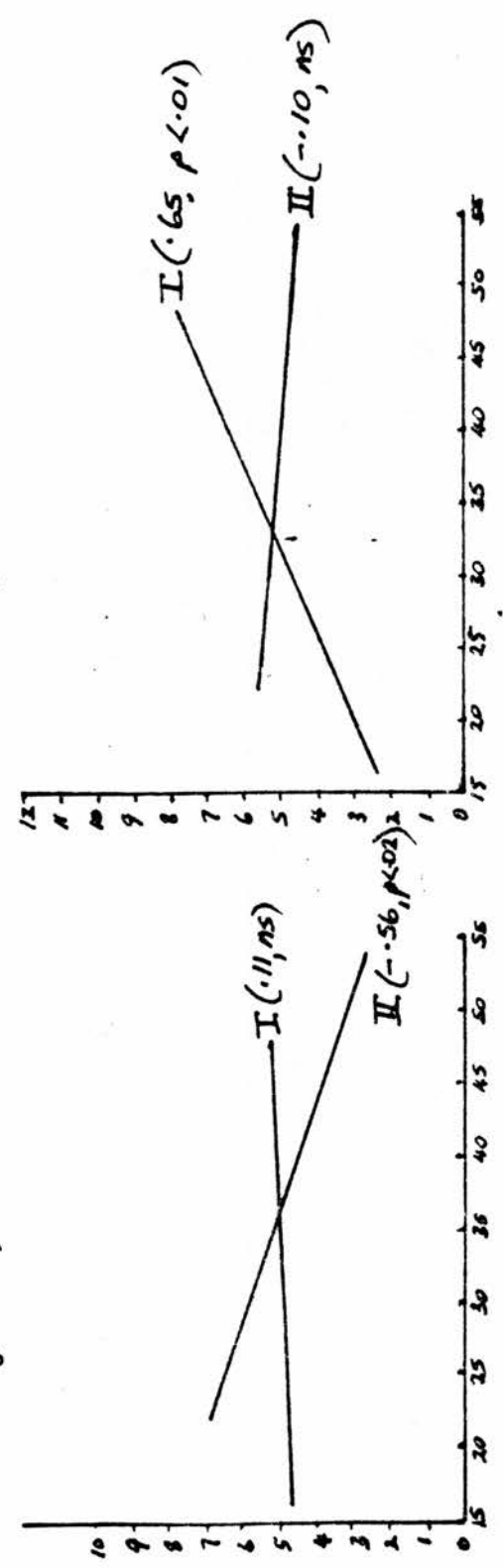
Mother in Episode 3

Mother in Episode 2



Stranger in Episode 4

Stranger in Episode 3



4) Show/Give

The only significant correlation between showing/giving and age before the birth of the sibling was positive and occurred as in Looking in Episode 4 (see Table 5.12). This supports the suggestion earlier put forward, that the older children may have been more friendly to the stranger when they were left alone with her. After the birth however, not only was this trend not significant, but it was slightly negative. That is the younger children and not the older tended to show/give to the stranger in Episode 4.

Again as in Looking, there was a general tendency for show/give to be negatively related to age in the Session II episodes. That is, the younger ones more than the older ones tended to show/give after the birth, and this was significant with the mother in Episode 2, and nearly significant to the mother in Episode 3. This result is most easily explained by the age difference (six months) of the children.

5) Distance Score

From Table 5.12 it can be seen that the only significant correlations between age and the distance the children maintained from their mothers and/or the stranger occurred only before the birth of the sibling.

With both the mother and the stranger present in Episode 3, there was a significant tendency for the children to be both more distant from the mother and less distant from the stranger with age. This suggests that in the mother's presence, the older children were less fearful of the stranger

FIG 5.5 Show/Give

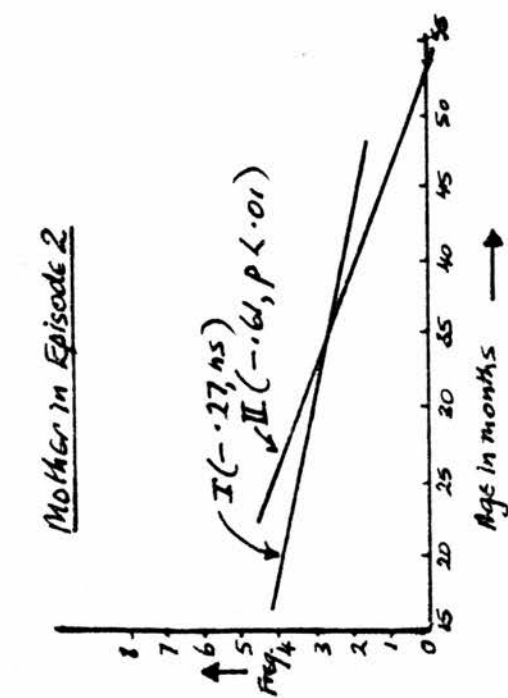
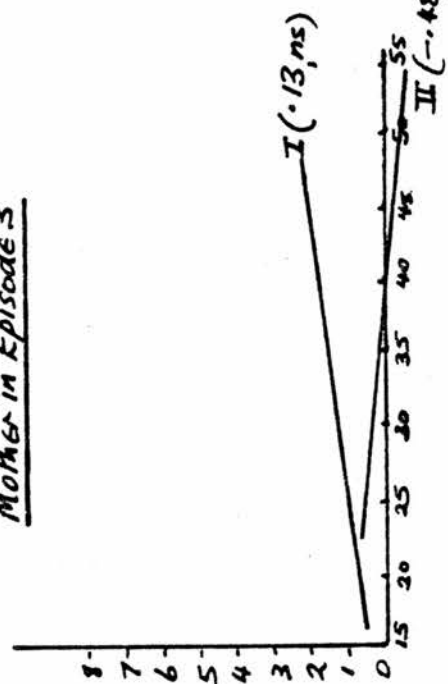
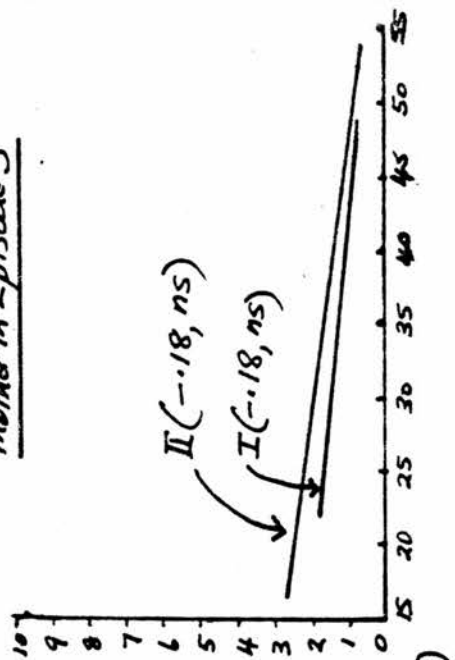
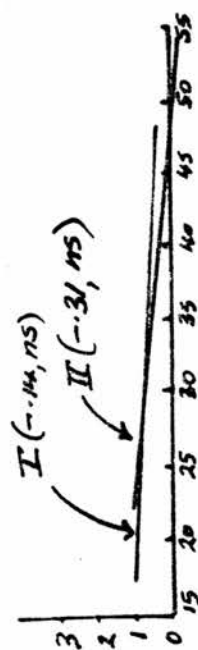
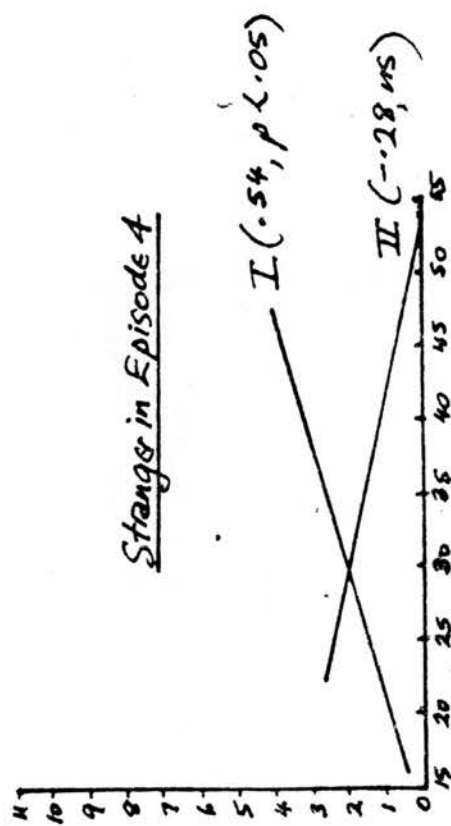
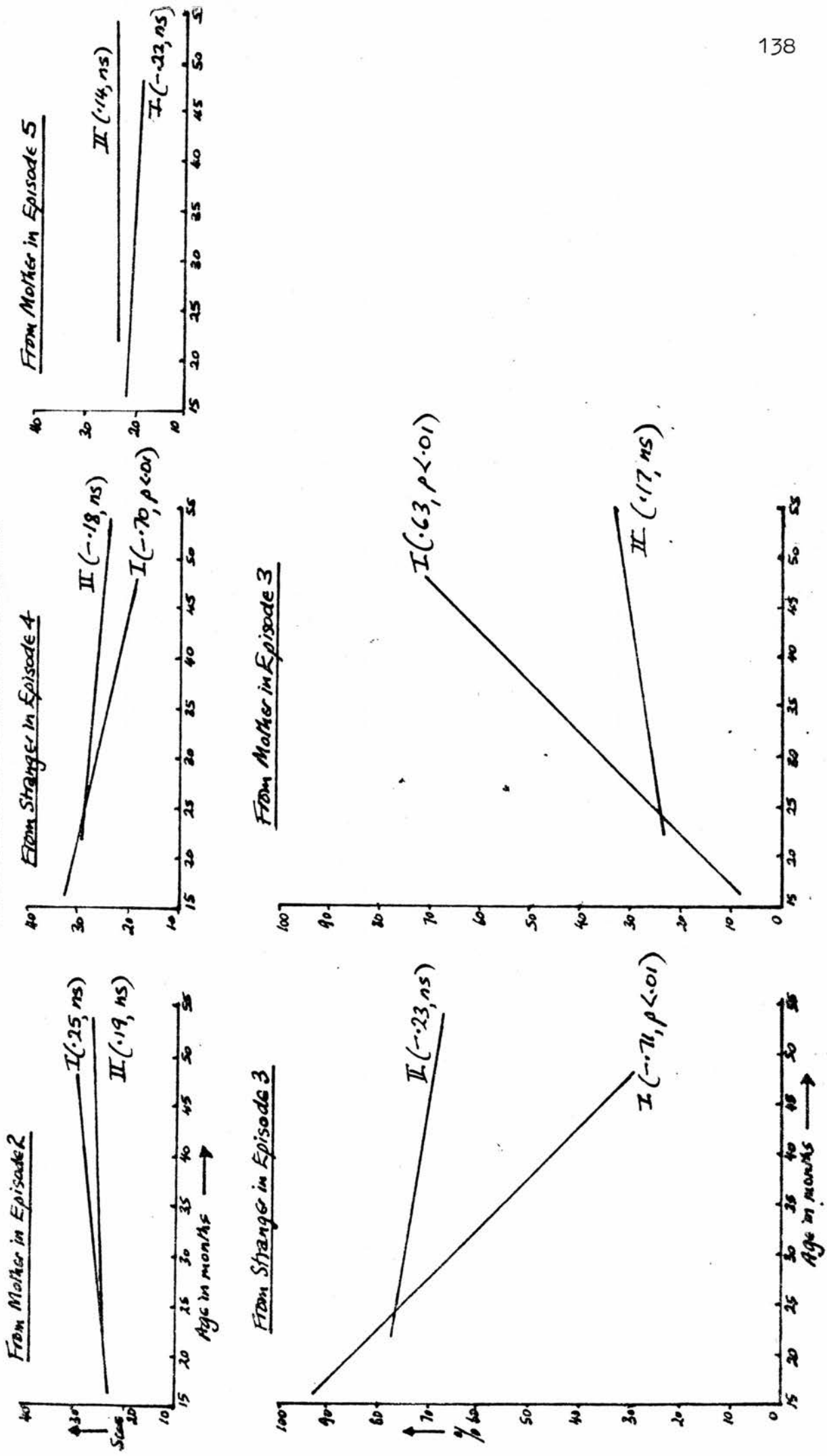
Mother in Episode 3Mother in Episode 5Stranger in Episode 3Stranger in Episode 4

FIG 5.6 Distance Score



before the birth. After the birth, this tendency to be comfortable in proximity to the stranger was upset, and the older children did not maintain distances from the mother or the stranger that were much different from the younger children (see Fig.5.6).

In Episode 4 where the children were alone with the stranger, three of the children left the room and refused to return in Session I. For scoring purposes, these three children were considered to maintain the maximum possible distance from the stranger. With these three results included the correlation between age and distance was significant and negative. This indicates again that older children were more comfortable with the stranger in Episode 4, and were physically less distant from her than the younger ones. However, if the three children are omitted from the calculation then the resultant correlation is no longer significant (see Table 5.12), although the same trend is maintained. After the birth, the significant relationship between age and distance in Episode 4 was also disrupted.

There was no significant correlation between age and the distances the children maintained from their mothers when alone with them in Episodes 2 and 5, both before and after the birth. As was earlier suggested (page 123), distance probably serves a different 'function' when with mother and when with stranger.

Table 5.13 Correlations between age and 'inter episode' events of:

	<u>Pre-birth</u>	<u>Post-birth</u>
Stranger entering the room	.67*	.34
Mother leaving the room	-.41	.05
Mother's return into the room	.33	-.24

* $p < .01$

Since all the children looked up as the stranger entered the room, both before and after the birth, correlations between age and looking were not done. What was calculated was the correlation between age and the distance from mother upon the stranger's entrance. Table 5.13 shows that before the birth, there was a significant tendency for older children to be further from mother and to maintain that distance, when the stranger entered. This suggests that the notion of a 'safe distance' is different for younger and older children. In the face of a 'frightening stimulus', younger children who were not already close to mother moved nearer, but the older children felt safe without having to be close. After the birth, older children did not maintain a significantly greater distance from mother as the stranger entered, compared to the younger ones.

When mother left the room in Session I, younger children tended to be more distressed, but this was not significant. In Session II however, there was a general absence of distress and therefore no correlation with age. This lack of upset when mother left the room in the post-birth session, has already been explained as an effect of the six month age increase.

On mother's return, and on the basis of the number of children who were in the room, it was found that there was a non-significant tendency for older children more than younger to show, smile and generally engage in positive behaviours besides just looking up before the birth. After the birth, however, it was the younger children and not the older who

tended (not significantly) to show that they were pleased to see their mothers back. The older children tended, again not significantly, to only look up as if to say, "Oh it's you", and then continue to play or talk to the stranger.

D. Individual Variation

Initially, Ainsworth and Wittig (1969) classified children into three groups, A, B and C, on the basis of the degree of distress they showed in response to mother leaving the room, at the end of Episodes 3 and 5. Later (Ainsworth, Bell and Stayton, 1971) this classification system was refined, and another based partly on the child's general reactions in the strange situation, but mainly on the reaction to mother's return at the beginning of Episodes 5 and 8 was devised. There were still three groups: A, B and C, but in addition eight sub-groups were specified. In brief, the three groups were characterised as follows:

Group A (proximity avoiding)

They are not distressed at separation and rarely cry, or get distressed only when they are left alone. They show little or no tendency to seek proximity, interaction or contact with their mothers on reunion.

Group B (normative)

Attachment behaviours are heightened by separation. On reunion they are happy to see their mothers back, seek proximity, contact or interaction.

Group C (resistant)

They are intensely distressed by separation. On reunion

they show heightened attachment behaviours, but also angry and contact-resisting behaviour, and in some also passivity.

As can be seen, degree of distress is still an important indicator, but more so proximity-seeking and contact-maintaining behaviours. In the present study, the children's ages ranged from 16.25 to 48 months before the birth, and 22.25 to 54 months after the birth. These age ranges then included older children in whom attachment behaviours in general are "less easily activated" and proximity in particular "less urgent" (Bowlby, 1971). Secondly, the classification by Ainsworth, Bell and Stayton (1971) is heavily based on two reunion episodes in the middle of which the child has both been alone and with the stranger a second time. Apart from this, the child has been separated from mother twice, and this would have contributed to his general reaction in the strange situation.

In the study being reported here, the children were separated and reunited once, and the episode involving the child alone was not done. Therefore, less information was available on individual children in the strange situation compared to Ainsworth, Bell and Stayton (1971). Because of the disparity in the procedures, and the distinguishing of groups on behaviours that were not often shown by the older children, the children in this study were not classified according to the three groups A, B and C. Instead attention was paid to those individuals whose behaviour was markedly different in more than one respect from the rest of the group, either before or after the birth or in both sessions.

According to Ainsworth and Wittig (1969) the securely attached child on entering the strange situation with mother, typically leaves her side and engages in exploration. This may involve just wandering about and having a look at the room and if there are interesting toys about, most children immediately start playing with them. When a stranger enters there is a reduction in exploration, and when the mother leaves the room, the child may or may not be overtly distressed, but there is a further reduction in exploration when he is thus left alone with the stranger. On mother's return, and the stranger's exit, exploration may not reach the pre-separation level, but the securely attached child is not so disturbed nor so suspicious of his mother's intentions that he is unable to resume play.

Most children, studied here behaved very much like the 'securely attached child'. However the behaviour of three children was very different from the rest. Marian displayed the most insecure behaviour before the birth; Ian exhibited contrary behaviour both before and after the birth, and Charity would not separate from her mother in the post-birth session. Each will be presented in turn.

Marian: aged 18.75 months in the pre-birth session was the fourth youngest child in the sample. Episode 2 (mother, child) started off with her sitting on her mother's lap. The mother made two attempts to persuade her to go and play with the toys, but each time Marian did not move. Thirty seconds after the episode started, the mother simply put her down. Marian moved off, picked a toy and returned to give it to mother. She did this four more times, and at the end of the

second minute, took the magazine from her mother and went to sit in her own chair. She then looked at her mother and smiled, leafed through a couple of pages in the magazine and threw it on the floor. Then she got off the chair, picked up a ball, and had just sat back on the chair when the door opened and in walked the stranger. In a split second she had flung the ball, slid off the chair and was running to mother with her arms stretched out (equivalent to "arms up" Blurton-Jones and Leach, 1972). Her mother picked her up, held her and tried to reassure her. Before the end of the first minute in Episode 3, the mother tried to put her down but she resisted release, clung to mother and buried her face in the mother's chest. During the second minute, the mother tried again to put her down and Marian resisted. The mother's attempt to interest her in a doll met with little success. In the third minute, the stranger called her name and held up a toy, Marian glanced at the stranger and buried her face. Halfway through the third minute, her mother put her down. Marian stood next to her mother and held onto her mother's hand. She looked at the stranger who was still trying to interest her in a toy, and pulling her mother's hand along (the mother co-operated and got up), she accepted the toy from the stranger and immediately turned her attention back to mother. The mother sat in her chair and Marian moved closer to her. She however took the few steps to receive another toy from the stranger which she then gave to her mother as Episode 3 ended. (Figs. 5.7a and 5.7c show the marked reduction in locomotion and manipulation respectively between Episodes 2 and 3.)

Her behaviour as the mother got up to leave, was no different from that of some of the younger children who became very upset. She ran towards her mother, cried, tried to open the door, cried harder, managed to get it open and left the room. The stranger followed, picked her up but was unable to calm her down. The episode was curtailed, the mother went back into the room, picked her up and held her. After she stopped crying, the mother tried to interest her in toys and to put her down, but for three and a half minutes this was not successful. Finally she was put down and Episode 5 was begun. Marian went and picked up a toy, examined it briefly and came back to mother 'eliciting pick up', to which the mother responded. Twice the mother put her down, twice Marian 'elicited pick up'. The mother finally put her down and stood up from her own chair. She then sat on the floor and tried to get Marian to play with the toys. Marian watched her mother but did not join in the play. Episode 5 ended as the session had begun, with her sitting on her mother's lap. (Figs. 5.9a and 5.9c show that she was the only one who showed a substantial reduction in locomotion and manipulation when Episodes 2 and 5 (Session I) were compared.)

Her behaviour in Session II, however, was not as disturbed as in Session I. She was a little apprehensive when the stranger entered and she did not locomote (Fig. 5.7b), but she manipulated objects and was not exceptional (Fig. 5.7d). She did stay in the room alone with the stranger, and although she did not move around, when her mother returned she did engage in manipulation.

Fig 5.7a Degree of individual change from E2 to E3 for:

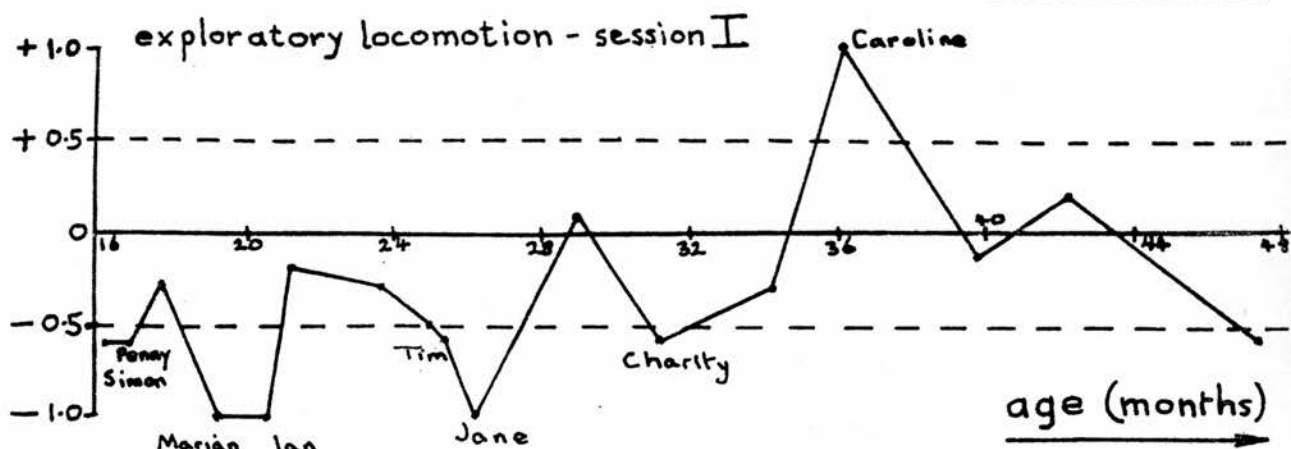


Fig 5.7b exploratory locomotion - session II

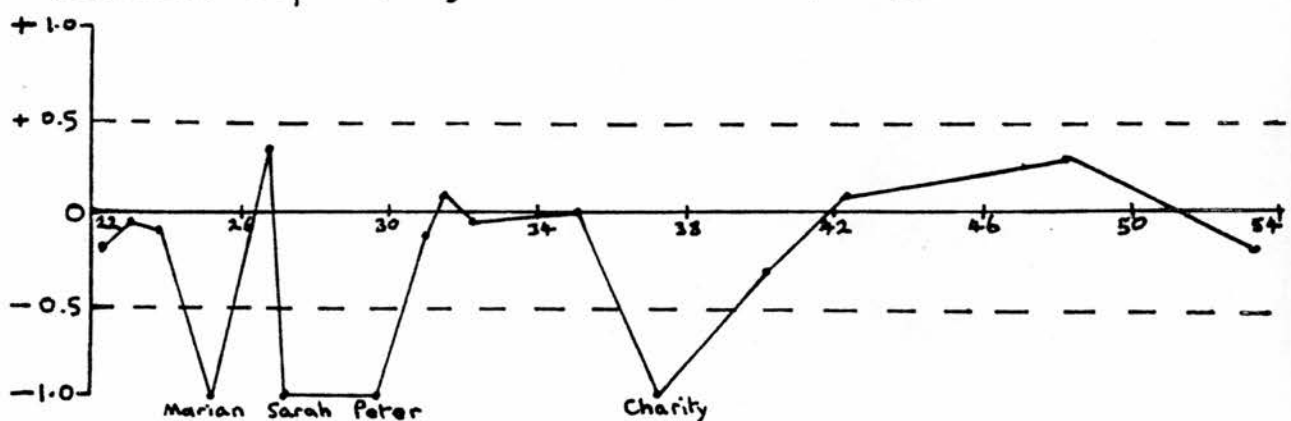


Fig 5.7c manipulation - session I

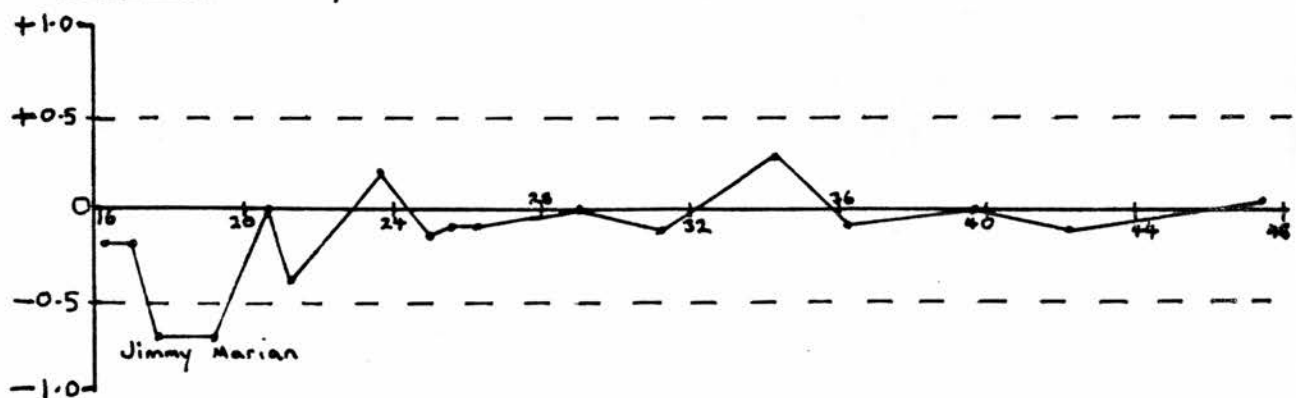


Fig 5.7d manipulation - session II

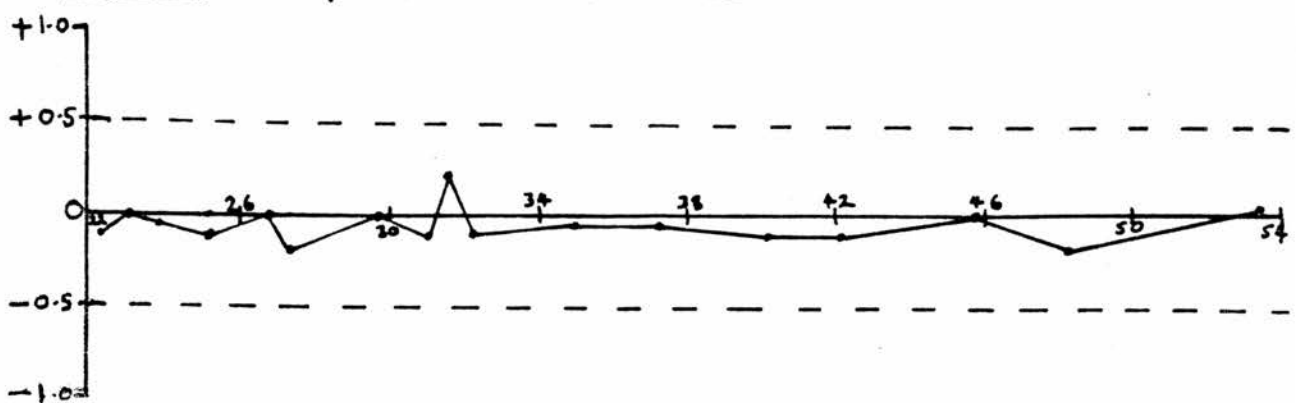


Fig 5.8a exploratory locomotion - session I

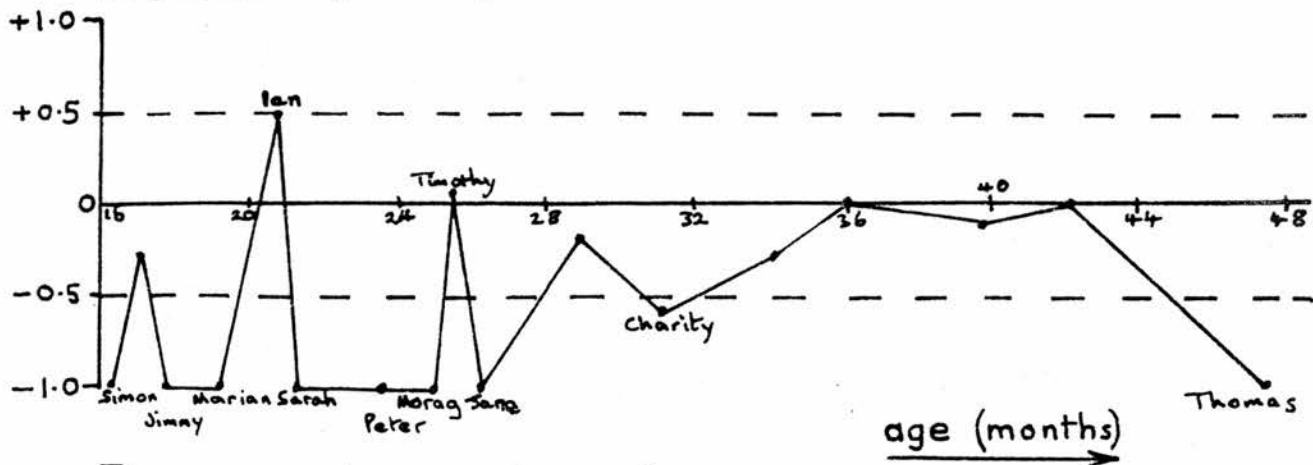


Fig 5.8b exploratory locomotion - session II

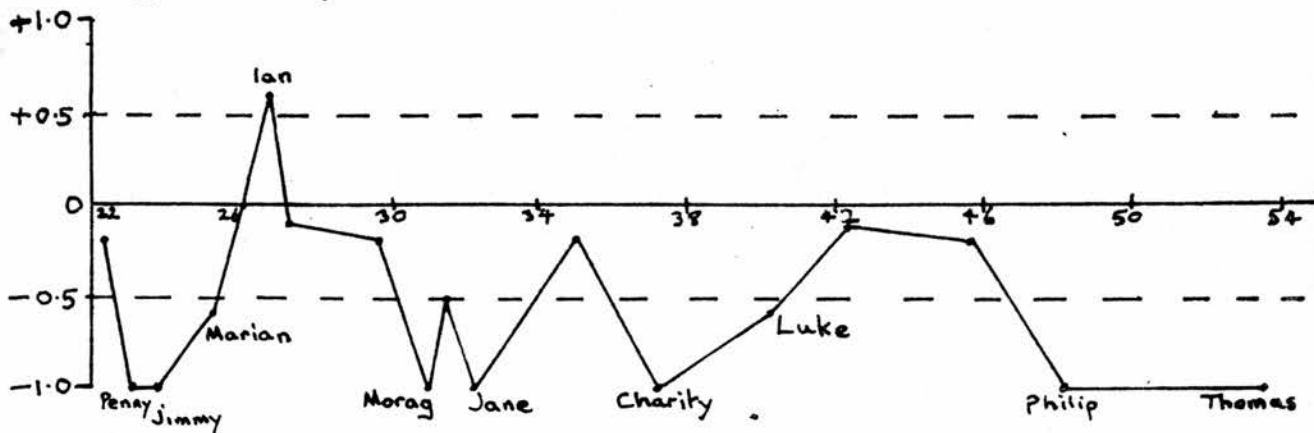


Fig 5.8c manipulation - session I

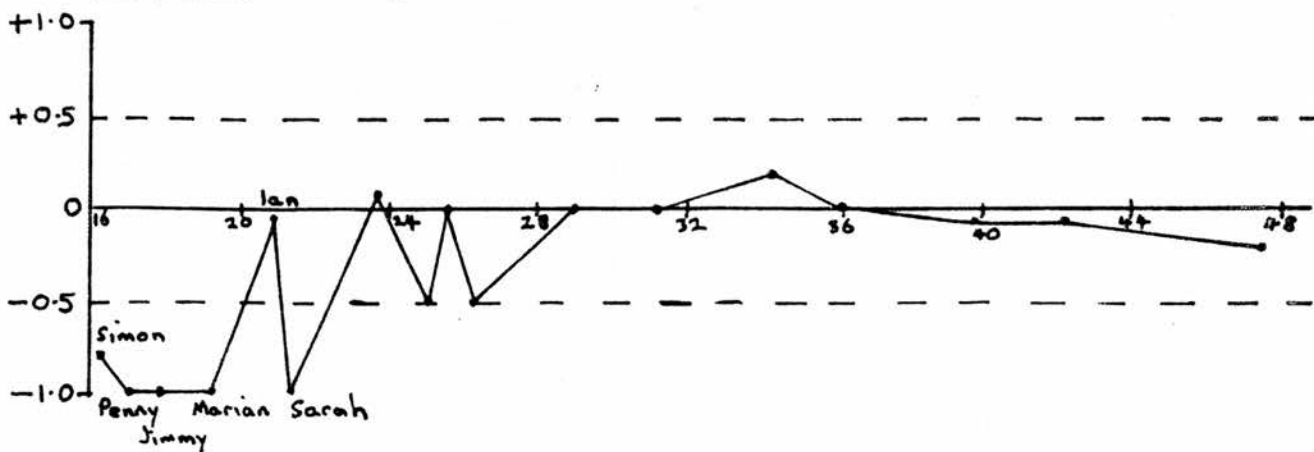


Fig 5.8d manipulation - session II

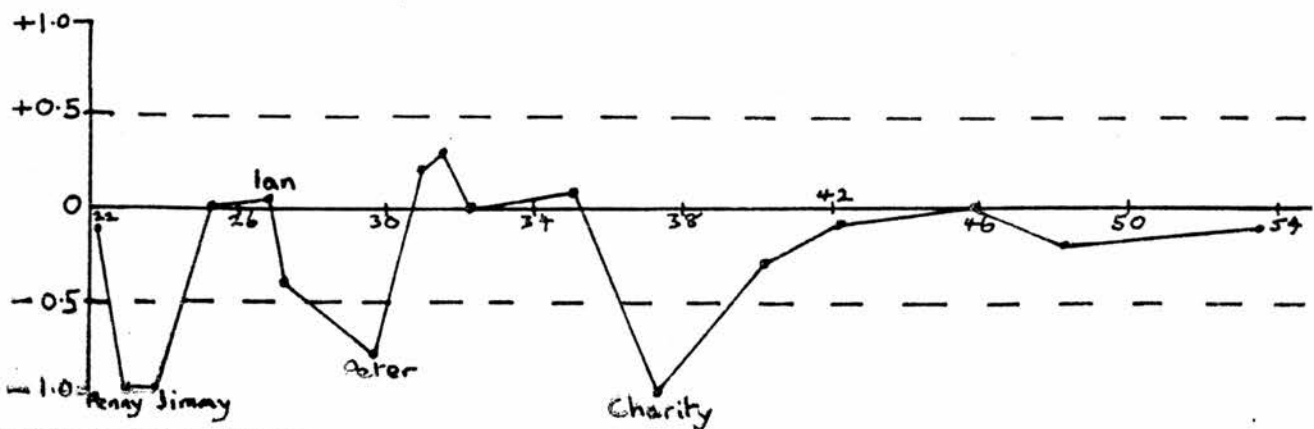


Fig 5.9a exploratory locomotion - session I

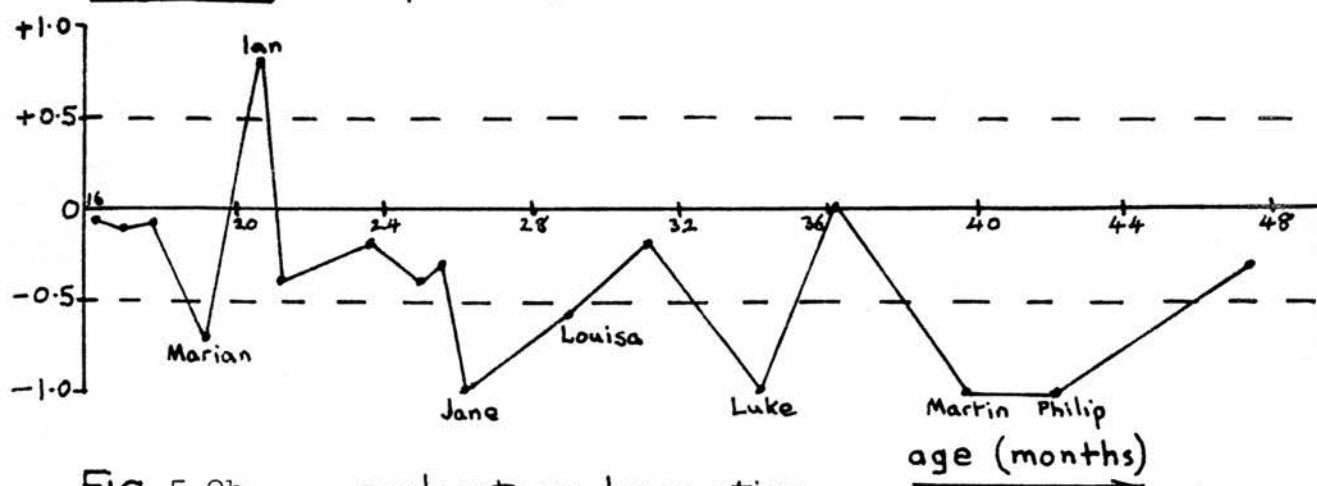


Fig 5.9b exploratory locomotion - session II

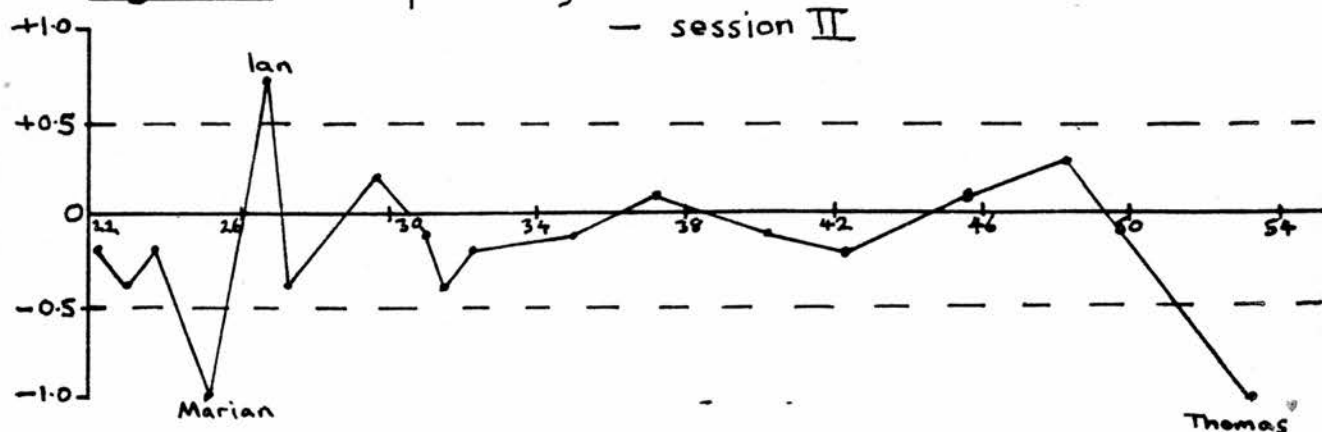


Fig 5.9c manipulation - session I

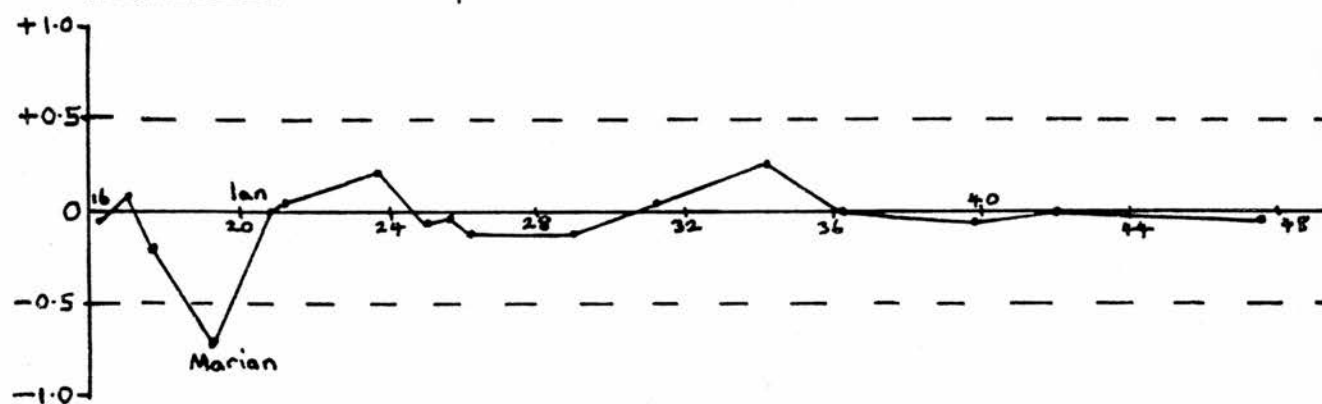
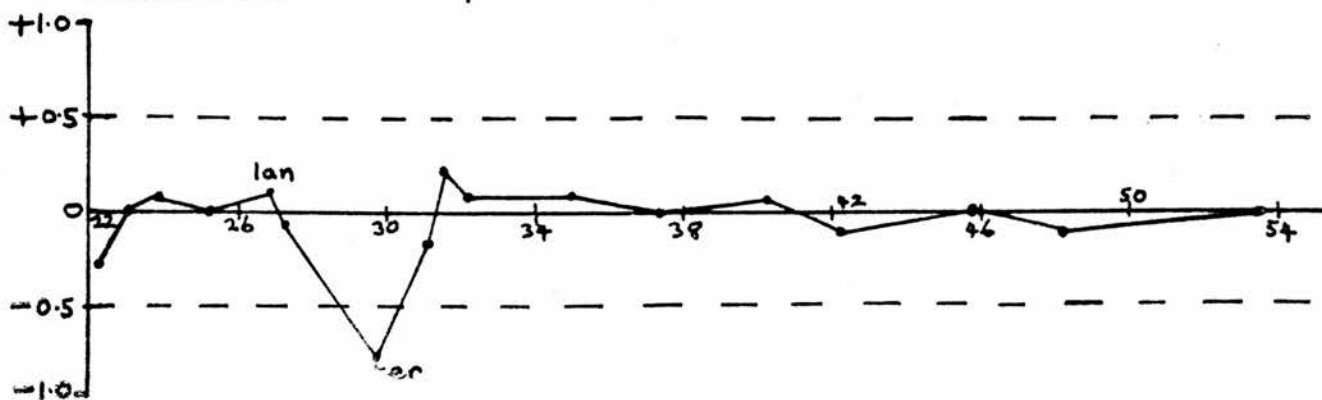


Fig 5.9d manipulation - session II



Ian: aged 21 months in the pre-birth session was notable for atypical behaviour. He was the only one who showed a substantial increase in exploratory locomotion when he was alone with the stranger in Episode 4, compared to when he was alone with the mother in Episode 2, both before and after the birth (see Figs. 5.8a, 5.8b). Further, Figs. 5.8c and 5.8d show that there was hardly any change in the frequency with which he manipulated objects in these same episodes.

His behaviour on mother's return, both before and after the birth, again showed considerable deviance compared to the rest of the group. This was particularly marked in the session before the birth, where he alone explored more on mother's return than in the initial episode with mother (see Fig: 5.9a). After the birth, there was a tendency in some children to explore more in Episode 5 than in Episode 2, but the only substantial increase was again shown by Ian (see Fig. 5.9b). At the same time, he maintained about the same levels in exploratory manipulation (Figs. 5.9c, 5.9d). Now the majority of the children did not show any appreciable change in manipulation either, but for a number of them there had been a reduction in exploratory locomotion.

Charity: aged 38 months in the post-birth session, was the only child who would not separate. Although she did not appear overtly disturbed when the stranger entered at the beginning of Episode 3, it was notable that she was the only one older than about 30 months who did not move from the one spot. Hence the marked reduction in locomotion in Fig. 5.7b.

As her mother was in the process of leaving, at the end of Episode 3, Charity followed and was at the door at the same time as the mother. The mother paused, Charity opened the door, and left the room ahead of her mother. The mother invited her back into the room, but she refused to come in. A few seconds later she did come in and held her mother's hand. The mother who was just inside the doorway, asked if she would like to do a jig-saw, Charity agreed. The mother then went back to her chair, Charity started to put the jig-saw pieces together, and both the mother and the stranger watched her play. Gradually the stranger took an active part, asking where the pieces go and attempting to engage Charity's whole attention on the jig-saw. Four and a half minutes from when the mother had sat down in her chair, she again got up to leave the room. Charity also got up, began to whimper and held onto her mother's hand. The stranger gave up and left the room saying, "Charity can stay and play with mummy".

Although Charity was described initially as the child who would not separate, from the preceding account, one gets the distinct impression that the mother would not separate either. It may therefore be more correct to refer to both of them as "the mother and child who would not separate".

DISCUSSION

None of the single measures in any of the episodes changed significantly from before to after the birth of the sibling. This indicates that the children as a group did not behave differently after the birth in terms of locomotion in

the strange room, manipulating toy objects, looking at the mother and/or the stranger, showing or giving them objects or in the distance they maintained from either the mother or the stranger.

On the other hand, comparisons between episodes showed significant differences for some measures either before or after, and in a few cases both before and after the birth.

There were more significant differences between episodes in the session before the birth than after (13 vs. 9 respectively). Of these, six comparisons were significant both before and after the birth of the sibling. Although a total of 22 out of all possible comparisons (60) were found to be significantly different in both sessions, certain measures in certain episodes contributed more to this total than others.

Before the birth of the sibling the children in this sample whose ages ranged from 16.25 to 48 months engaged in exploratory locomotion in the initial episode (2) with the mother alone, significantly more than they did in any other episode. They also manipulated toy objects significantly more in all three episodes during which the mother was present, compared to when they were alone with the stranger.

That children happily engage in exploratory behaviour and do not show distress when they are initially introduced into a strange room with their mothers present, is a finding on which there is considerable and consistent agreement in the literature. This observation has been found to be true for children whose ages ranged from 10 to 48 months (e.g. Rheingold, 1969; Ainsworth and Wittig, 1969; Cox and Campbell,

1968; Gershaw and Schwartz, 1971; Passman, 1977; Adams and Passman, 1979). Indeed it is thought by some (e.g. Ainsworth and Wittig, 1969) that the ability to use mother as a secure base from which to explore is "one of the most important criteria for a healthy attachment". (p. 112).

That these same children for whom mother's presence is comforting and security-providing in an unfamiliar environment are a little disturbed when a strange person appears on the scene has also been well documented. They "retreat to mother" (Maccoby and Feldman, 1972), explore less and play less (e.g. Ainsworth and Bell, 1970) talk less to their mothers (Adams and Passman, 1979) and in general engage in less interaction with their mothers. The children in this sample confirmed these findings. When the stranger appeared they moved closer to their mothers and explored less. There was a near significant reduction in manipulation ($p = .058$), they did less showing and giving to the mother and they looked at the stranger more than the mother, before the birth.

Furthermore, this disturbance is not unique to humans alone. Many observations on the young of animals in the laboratory (e.g. Harlow, 1963; Harlow, Harlow and Hansen, 1963) and in the field (e.g. Hersher, Richmond and Moore, 1963; Jay, 1963; Hamburg, 1969) have shown that in the face of a fearful stimulus, mother and infant are drawn together.

That most children become distressed when their mothers leave them in a strange environment with a strange person is also clearly established. They explore less and play less.

Before the birth of the sibling the children in this sample showed a significant decline in exploratory locomotion when left alone with the stranger. Most remained in the one spot. They also manipulated objects significantly less than they had done in any other episode. Both these findings are consistent with those of numerous workers (e.g. Rheingold, 1969; Ainsworth and Wittig, 1969; Maccoby and Feldman, 1972).

After the birth a slightly different picture of the children's behaviour in the strange situation emerged. However, the direction of the trends between episodes were remarkably similar for both sessions. That is, there was a tendency for children to differentiate between the episodes in the same way, both before and after the birth. But before the birth the differentials were stronger. Thus before the birth the children were most secure when they explored the strange room in the initial episode with mother, than in any other episode. After the birth this security was evident only in comparisons between episodes where the children were alone with the mother, and alone with the stranger. Before the birth the children's play was facilitated by the mother's presence in all three episodes during which she was present, and inhibited by the stranger's when the children were alone with her. After the birth the security in mother's presence and the discomfort when alone with the stranger were not significantly apparent.

All the significant results on looking, show/give and distance involved the stranger. Further, five out of the total of six sets of comparisons that were significant in both

sessions involved these three measures. They will be referred to shortly.

There was little change in reaction to the stranger's entrance, from before to after the birth. When the mother left the room in the pre-birth session there was a strong tendency for the children to get upset, and this was more marked in the younger children. On mother's return however, the children as a group tended to be pleased to see her back. In the post-birth session the children were not overtly anxious at mother's departure, and they showed minimal response to her return. The absence of distress on her departure in the post-birth session was earlier attributed to age. The younger children who had shown the most intense response in the pre-birth session, were in the post-birth session, mostly beyond the two year age up to which the strong reaction had been seen. This explanation is consistent with e.g. Weinraub and Lewis (1977). They suggested that children older than two years were better able to form a cognitive structure to interpret the separation event. Thus they were less disturbed than younger ones. Cox and Campbell (1968) also found that crying was rare, when two to three year olds were separated in the strange situation.

Reaction to mother's return, apart from proximity-seeking, would seem little affected by age. The correlations between this measure and age were modest in both sessions, and not significant. There are indications that older children do not tend to approach mother and thereby effect proximity on her return (e.g. Maccoby and Feldman, 1972). However, in showing

no other positive behaviour to indicate that they were pleased to see mother in the post-birth session, the children's behaviour suggested a change in the nature of the relationships. Interestingly, this changed nature of the attachments, which the evidence points to as occurring after the sibling births, was not accompanied by heightened attachment behaviours.

Now the question arises as to why the consistent patterns that were observed before the birth, particularly in exploratory locomotion and manipulation, were not obtained after the birth. There are three possible explanations.

One explanation would be that these reactions are not stable. There was an intervening period of six months between the two sessions, and as most people know children's behaviour and reactions vary not only from month to month but also from day to day. Indeed a few researchers (e.g. Schaeffer and Emerson, 1964) found no stability in children's intensity of attachment over a six month period.

A second possible explanation would be that the children being six months older had probably gained a little more experience of strange situations, and therefore felt more comfortable the second time round. Also, as they had been in the same room before, it was no longer strange but familiar. The evidence from Session II however, does not support this explanation. When the stranger appeared in Session II the children maintained closer proximity to their mothers than to her, from which safe haven they looked at her more than the mother. There was also a significant decline in the amount of looking at the mother and showing/giving her play objects.

When left alone with the stranger, the children showed a significant decline in exploratory locomotion and maintained a greater distance from her than they did to the mother on her return.

That a common factor in the aforementioned patterns that were consistent before and after the birth is the presence of the stranger is interesting. More so because in all cases except five, a different person served as the stranger in Session II. Maccoby and Feldman (1972) also found stable cross-age patterns in episodes during which the stranger was present. They argued that it was ^{*}"the tendency to become afraid in the presence of a specific stimulus, and the tendency to react to the fear with a specific response" (p. 62), that were stable for the age range they studied (2 - 3½ years). This argument appears to fit in with the consistent patterns presented earlier and involving the presence of the stranger. Therefore, if as did happen, the children's reactions to the presence of the stranger and their ways of dealing with this situation were unchanged from before to after the birth of the sibling, they could not have felt significantly more comfortable nor felt the situation so familiar the second time round.

The third and it is believed most likely explanation is that the birth of the sibling disturbed the between-episode patterns that were obtained before the birth. This explanation derives support from two main sources:

Firstly, the results of the between-episode comparisons obtained in this study before the birth, are in close agreement with those found by other workers, and have already been cited.

Secondly, measures that were significantly correlated with age before the birth of the sibling were greatly disturbed after the birth.

As with the comparisons between episodes, some measures were significantly correlated with age either before or after the birth of the sibling. Also, there were more significant age-correlations before the birth than after (10 vs. 3 respectively). No single measure was significantly correlated with age in both sessions. Table 5.14 presents only the measures that were significantly correlated with age.

Table 5.14Age-related Activities

		Pre-birth	Post-birth
<u>Exploratory Locomotion:</u>	E2	-.65	
	E5	-.76	
<u>Exploratory Manipulation</u>	E3	.76	
	E4	.65	
	E5	.52	
<u>Looking:</u> Mother in	E2		-.65
	E3		-.56
	E4	.65	
<u>Show/Give:</u> Mother in	E2		-.61
	E4	.54	
<u>Distance:</u> From Mother in	E3	.63	
	E3	-.71	
	E4	-.70	

Note: All correlations are significant beyond $p < .05$ (Spearman's 2-tailed test).

E = Episode

Episode 2 = Mother, Child

Episode 4 = Child, Strange

Episode 3 = Mother, Child, Stranger

Episode 5 = Mother, Child

It is immediately striking, on looking at the regression data (Figs. 5.2-5.6), that in all cases, even in those where the age correlations were not significant, the Session II data show either reductions in a trend already established, or the establishment of new trends, which are in exactly the same direction throughout all episodes. This consistency also occurs in the "least affected" age, which seems to lie at around 25 to 30 months of age at the birth of the sibling.

With regard to specific changes, before the birth and in the presence of the mother alone (Episodes 2 and 5), locomotion significantly decreased with age. This is not surprising as older children tended to quickly settle down and play with the toys rather than wander about exploring the room. A similar negative finding for Episode 2 was reported by Maccoby and Feldman (1972) for their American sample, although they referred instead to 'activity'.

Before the birth, there was no significant relationship between locomotion and age in Episodes 3 and 4 of this study. This differs from Maccoby and Feldman (1972) who reported a significant negative relationship for both these episodes.

After the birth however, locomotion was not significantly related to age in any episode. Before the birth manipulation of objects occurred significantly more with age when with the mother and the stranger (Episode 3), alone with the stranger (Episode 4) and with the mother on her return (Episode 5). This too is in agreement with Maccoby and Feldman (1972) for Episodes 3 and 4. Episode 5 was omitted from their analysis.

However, after the birth of the sibling, none of the previously significant relationships were observed.

Before the birth, both looking at the stranger and showing/giving her objects in Episode 4 significantly increased with age. Thus the older the child the more he/she interacted with the stranger and the less distance he/she maintained when alone with her. Maccoby and Feldman (1972) and Rosenthal (1965) (quoted in Maccoby and Masters, 1970) have both provided evidence that older children are better than younger children at making use of the stranger as a source of security in anxious situations. After the birth this relationship was not found.

The only other significant age-related finding with distance occurred before the birth. This was the tendency to be both nearer the stranger and further from the mother with age in Episode 3.

The only significant correlations with age that occurred after the birth of the sibling and not before, were a decrease in looking at the mother and showing/giving her objects in Episode 2, and a decrease in looking at the stranger in Episode 3.

That the pattern of correlations (or lack of) reported for after the birth of the sibling was different from before the birth is obvious. So too were some patterns of between-episode comparisons different for before and after. It appears therefore, that the birth of the sibling disturbed the patterns of attachment-associated behaviours observed in Session I.

(Individual differences are discussed in Chapter 9.)

Chapter 6

Standard Day Interview

INTRODUCTION

The Standard Day Interview technique as devised by Douglas, Lawson, Cooper and Cooper (1968) is a means of determining the amount and type of attention given to very young children by different persons on an ordinary weekday. The investigator interviews the mother and gets her to describe in detail the child's activities and the nature of its contacts with others during the immediately preceding 24 hours. This provides information about:

- (a) "The child's activities and their duration.
- (b) The number and identity of the persons encountered by the child.
- (c) The intensity and duration of the attention given to the child during his activities."

(Douglas et al, 1968, p. 160)

Definitions of degrees of intensity of attention were devised to make the information in (c) quantifiable. The categories and their definitions were as follows:

1. Concentrated

A child is said to be in concentrated interaction with another person if two out of the following three conditions are met:

- (i) There is physical contact.
- (ii) The other person is sharing in the activity.

- (iii) The child and the other person are giving the activity and each other their full attention.

For example, the child is sitting on mother's knee and they are looking at a book together.

2. Continuous

The child must be under constant supervision with considerable interaction between the child and another person, but without the conditions for concentrated interaction being met. This category was used conventionally in situations where the child was "playing" with other children or when the family was "out" shopping or for walks.

3. Available

Available attention covers supervisory situations when someone is available without delay when required; attention and interaction are likely and possible though not necessarily reported in detail; as in situations where the child can communicate with someone by talking, or is in sight of someone.

4. Separate

A child was recorded as "separate" when communication was only possible by shouting, or by the child and the nearest person going to find the other - that is to say, the child was "alone".

(From Douglas et al, 1968, p. 162)

Having developed and tested their technique mainly on the sample of 54 families, Douglas and his co-workers then studied another three samples of 58 families. From these

four studies they concluded, amongst other things, that:

- a) information from maternal interviews agreed highly with that obtained from direct observation,
- b) the amount and type of care given to children in individual families varied little between weekdays,
- c) it was possible to assess from mothers' reports the amount and quality of care their children had received.

In so far as it was thought that the amount and type of attention children receive changes upon the birth of a sibling, this technique was employed in this study. It was carried out three times in all: one month before the birth of the sibling, then at two months and eight months after the birth respectively.

Of the four categories developed by Douglas et al, three were employed. The category called "concentrated" was adopted in its entirety, the "continuous" and "available" categories were slightly modified and "separate" was included under "available".

Whereas in their definition for concentrated interaction the minimum of distance between the child and another person is implicit in the conditions to be met, that is: physical contact, sharing in an activity and giving the activity and each other their full attention, neither the Continuous nor the Available category is as precise. While it is possible to assess from a mother's report that a child was under constant supervision (to qualify for "Continuous"), judgement on whether "considerable" interaction had taken place between them is less easy to assess. The category "Separate" was

initially included in this study but the frequency of occurrence was so low that it was dropped, and included under "Available".

In the light of these comments, the definitions for "continuous" and "Available" were slightly modified as follows:

Continuous

The child and the other person must be in the same room with some interaction occurring between them, but without the conditions for concentrated interaction being met. An example would be the mother doing her housework while the child plays near or far from her but within sight of each other.

This category was used conventionally for meal-times if the child was with more than one other person at the table or if the child was eating and mother was merely supervising, "keeping an eye" without actually feeding the child. Also included under this category were "out" shopping, driving or walking.

Available

Available attention covers situations where someone is available if required, but essentially the child and the other person are far from each other and/or out of sight of each other. An example would be the mother in the kitchen and the child playing alone in another room or in the garden.

In both cases mothers report that they can "hear" the child playing or are able to see the child from a window, and in any case the child is never so far that if he were to cry mother would not hear; therefore she would be available

without delay if needed.

This category was also used conventionally for periods during which children were at nursery, a situation where an adult was always presumed available.

METHOD

Subjects

The seventeen children children of the Main Sample, 9 boys and 8 girls served as subjects initially. However, one family emigrated and the last Standard Day Interview (8 months post-sibling) comprised sixteen subjects, 8 boys and 8 girls. The children's ages ranged from 17.25 to 49 months with a median age of 26.75 months on the first occasion of the Standard Day Interview (1 month pre-sibling). They were all about nine months older when the interview was done for the last time.

Procedure

As has already been mentioned, the procedure centres on the mother describing, in as much detail as she can recall, the activities of the immediately preceding 24 hours; as such no schedule or guide is needed.

The interview started with the mother being asked to describe activities that were occurring at the same time the previous day, and continuing chronologically until the interviewer's arrival in the home. Thus, if the interview was being done at 3 in the afternoon, the periods covered were "yesterday afternoon from 3", "yesterday evening and night",

"this morning" and "this afternoon" till the interviewer arrived. Apart from seeking detailed information on the child's activities and their duration, the mother was also asked how far she or anyone else in the house had been from the child at any particular moment, what she had been doing, what anyone else had been doing and in all, everything that had happened in the 24 hours.

The interviews were done on an ordinary weekday, morning or afternoon, but attempts were made to exclude Mondays as part of Sunday would be covered in the 24 hours. Holidays and all other unusual days were also excluded whenever possible.

A tape recording of each interview was made on a portable tape-recorder and later transcribed. The transcript, together with a plan of the layout of the home which the mother was requested to draw were used for scoring. In cases where the family moved house, a new plan was requested.

The following extract taken from a transcript of an interview illustrates the interviewing method:

About 3.00 p.m.

Q: Do you know what they played with when they were in the garden?

M: Mostly with the sandpit, and his paddling pool which we had taken down there . . . and oh, you told me that you'd made a road system in the sandpit didn't you yesterday afternoon? Is that right?

C: Yes.

M: This is what we did on the beach when we were on holiday . . . er, he likes making long road systems that the

lorries go round, and there are garages here and crossings there and so on. . . . So it was really the sandpit and the paddling pool.

Q: Was there sort of chasing around and shouting and laughing . . . was it all very lively or quiet?

M: Ah . . . well in spurts, but mostly it was pretty hot and I think Liam (father) was reading the paper much of the time and he was playing quite happily on his own . . . he doesn't tend to be a very noisy child playing on his own, but if you get other kids there, then there's a lot of rushing about . . . and shouting and banging. But he gets very absorbed in this sort of railways and roads and things . . . and then they came in about half past five and had tea.

Q: Is this tea of a main meal or a cup of tea?

M: It's his main tea, his supper.

Q: And how was he over tea?

M: Oh fine . . . he ate well.

C: (To Interviewer) That's a clock, that's clocking.

Q: Yes. . . . About how long was he over supper?

M: Three quarters of an hour.

Q: Were you at table as well?

M: I'm afraid we were having a lazy supper in . . . the . . . it was just him, we weren't eating, we had our dinner afterwards. We wanted to watch the news, so we let him have it on the coffee table in the sitting room.

(N.B. . . . indicates a pause)

Scoring Procedure (based on Douglas et al, 1968)

Using the transcript and the plan of the family house, a summary of all the reported activities and their durations was made in chronological order. Each activity was then categorised under the heading of Concentrated, Continuous or Available. A total of the durations for each category was then obtained, and this indicated how much total time was devoted to Concentrated, Continuous and Available interaction.

For the purposes of comparing across the group, the total time at each of the three levels of interaction was expressed as a proportion of the whole time considered. The whole time refers to the total number of hours and minutes during which an individual child was awake over the 24 hours. Activities like kissing, cuddling and smacking which could not possibly be timed were taken note of but excluded from the analysis. Also excluded from the total time were periods during which the child was asleep.

In calculating the time devoted to each of the three levels of interaction, the number of persons present is not taken into account. "It is rare for a child to be in Concentrated interaction with more than one person, but he may at the same time be in Continuous or Available interaction with several persons" (Douglas et al, 1968, p. 162). For this estimation, a weighted score - the "attention score" is used. It can be related separately to each activity and to the various persons present. Douglas et al used arbitrary weights of 4 for Concentrated, 2 for Continuous and 1 for Available. The attention score for a whole day was then

obtained by summing the weighted times for each activity.

While it may be of interest to know for example, that a child was engaged in Concentrated interaction with his grandmother, Continuous with his mother, and Available with his father, all at the same time, our main interest here is in the intensity of attention a child received, and the number of persons he came into contact with at any one "visit". Therefore for our purposes, it is more important to know that the child was in Concentrated interaction with his grandmother for 10 minutes, than that he was in Continuous and Available interaction with his mother and father respectively for the same duration. Also of interest, as has already been mentioned, is the total number of persons the child was in contact with. Therefore the weighted scores are related to the number of persons rather than the duration of the activity. Thus a child who was in Concentrated interaction with three different people over a whole day gets an attention score of 12 for Concentrated. The same procedure with the relevant weights is then carried out for Continuous and Available, and the total attention score is the weighted sum for the three levels.

RESULTS

The questions asked were:

- 1a) Does the amount and quality of attention given to children change from before to after the birth of the sibling?
If there is a change:
- b) Is it related to the children's age?

- c) Is it due to associations between periods for individual categories?
- 2. Do mothers and fathers separately contribute differing amounts and kinds of attention from before to after the birth?
- 3a) Does the range of a child's contacts and hence the total number of persons giving attention change from before to after the birth?
- b) Are the number of persons a child comes into contact with before and after the birth related to the child's age?
- 4. Are there marked individual variations in the amount and type of attention given to individual children from before to after the birth?

Note: 1) N = 17 for 1 month Pre and 2 months Post-Sibling.

N = 16 for 8 months Post-Sibling.

- 2) Comparisons involving 8 months Post-Sibling and either of the other two periods is based on N = 16.

1. Total amount and quality of attention from before to after the birth

The graphs in Fig.6.1 are all very similar. They show little difference between the amounts of Concentrated and Available interaction, and at all three time periods the highest amount of care is at the Continuous level. Therefore it would seem that there was little change in the amount and kind of care the children received from 1 month before to 2 and 8 months after the sibling birth.

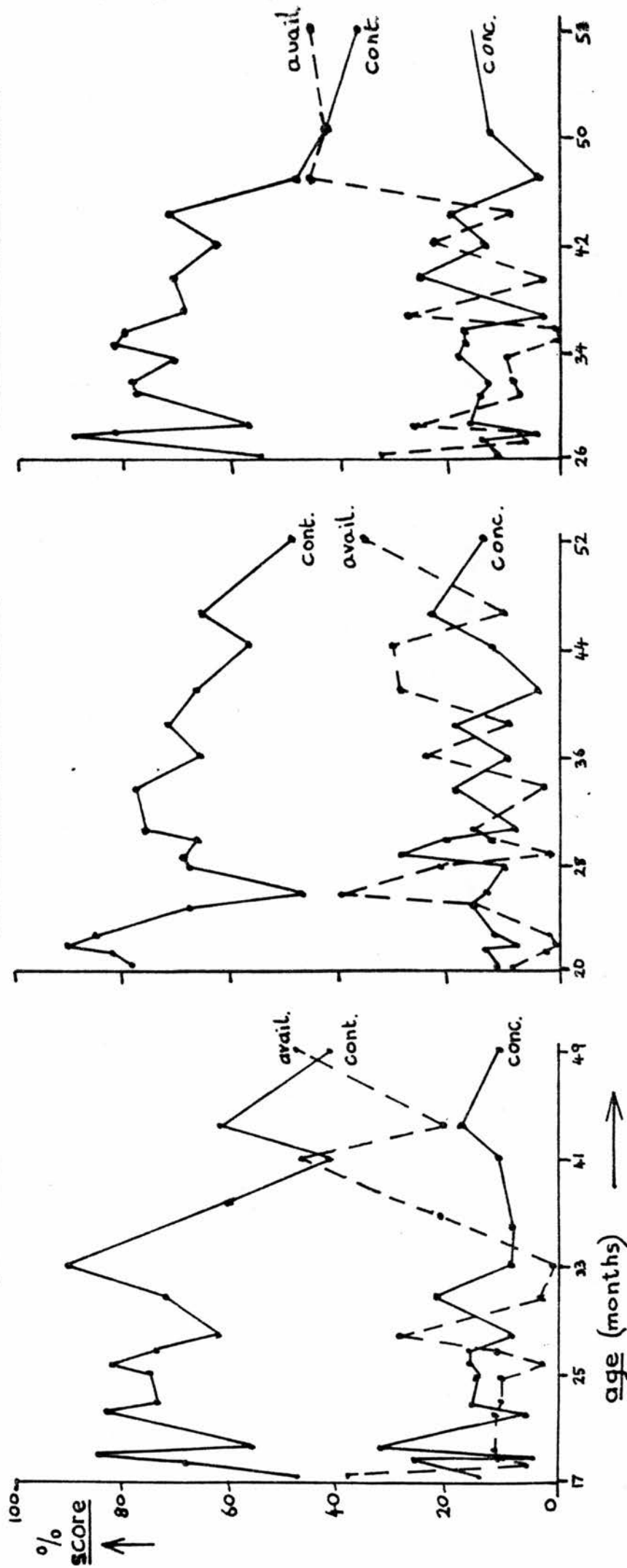
A second point to note from these graphs is that since

Fig 6.1 Standard Day Interview - Percentage score for each individual by age at:

1 month pre-sib

2 months post-sib

8 months post-sib



Key: conc.: concentrated interaction cont.: continuous interaction avail.: available for interaction

Note: The same individual occupies the same relative position on each graph.

each point represents an individual child, in the same relative position on each graph, the similarity in all three sets of graphs may suggest strong individual differences. These are dealt with later (see p.177).

That the children did not receive significantly different amounts of care at all three levels (i.e. Concentrated, Continuous and Available) from before to after the birth is supported by the results in Table 6.1. They show that no comparison between any two time periods at any of the levels of interaction yielded significant differences. Two of the non-significant trends however deserve mention because apart from suggesting the direction of change, the children's age and associations between periods for two of the categories are both implicated. The first of these non-significant tendencies was for the children to be engaged in Concentrated interaction both at 2 and 8 months Post- more than at 1 month Pre-Sibling. This may suggest an attempt by the care-givers to minimise the effects of the first child's displacement, or at least the sibling's presence. While this non-significant trend was not related to the child's age (see Table 6.2), it can be explained by the significant positive correlation between 2 and 8 months Post- for the Concentrated scores (see Table 6.3).

The second of the non-significant trends was for the children to be involved in Continuous interaction at 2 months Post- more than both at 1 month Pre- and at 8 months Post-Sibling. This trend is apparent despite the fact that by the time of the 2 months and 8 months post-birth interviews, there

was a significant trend for the older children to receive less continuous attention than the younger ones (Table 6.2). The age increase between the interviews has presumably allowed this trend to become significant, but the findings may be exaggerated by a slight increase in the Continuous category, either because the children were least secure at 2 months Post- and therefore maintained a smaller distance between themselves and the care-givers, or that their care-givers initiated most Continuous care at this period; or both. The non-significant trend could also be explained by the significant correlation between 1 month Pre- and 8 months Post continuous scores (see Table 6.3).

2. Mothers' and Fathers' Contributions

Since the results in Table 6.1 were based on the total amounts of each type of interaction the children were engaged in, irrespective of who was contributing how much, it was of interest to compare mothers' and fathers' contributions as they were the chief contributors. The results are presented in Table 6.4. As can be seen, the one similarity that stands out between the mothers' and fathers' contributions (as well as with the results in Table 6.1), is the lack of significant findings. Out of nine sets of comparisons at the three levels of interaction, the mothers' contribution was significantly different only on one. That is, mothers were significantly more involved in Continuous interaction with their first-born children at 8 months Post- than at 1 month Pre-Sibling.

Table 6.1 Comparisons of levels of interaction across visits
(All care-givers) (Sign test - 2 tailed)

Concentrated

2 months Post > 1 month Pre	n.s.	(N = 17, x = 7)
2 months Post \nless 8 months Post	n.s.	(N = 14, x = 7)
8 months Post > 1 month Pre	n.s.	(N = 16, x = 7)

Continuous

2 months Post > 1 month Pre	n.s.	(N = 17, x = 7)
2 months Post > 8 months Post	n.s.	(N = 16, x = 5)
1 month Pre \nless 8 months Post	n.s.	(N = 16, x = 8)

Available

1 month Pre > 2 months Post	n.s.	(N = 17, x = 5)
8 months Post > 2 months Post	n.s.	(N = 15, x = 6)
1 month Pre > 8 months Post	n.s.	(N = 16, x = 4)

Table 6.2 Correlations (rs) between age and total scores

	Concentrated		Continuous		Available	
1 month Pre	-.10	n.s.	-.28	n.s.	.28	n.s.
2 months Post	.19	n.s.	-.66	p < .01	.21	n.s.
8 months Post	.21	n.s.	-.53	p < .05	.18	n.s.

Table 6.3 Correlations between periods for each category

	Concentrated		Continuous		Available	
1 month Pre & 2 months Post	.47	n.s.	.13	n.s.	.29	n.s.
2 months Post & 8 months Post	.75	p < .01	.27	n.s.	.41	n.s.
1 month Pre & 8 months Post	.38	n.s.	.69	p < .01	.22	n.s.

Table 6.4 Comparisons of levels of interaction across visits:
Mother's contribution (Sign test - 2 tailed)

Concentrated

2 months Post > 1 month Pre	n.s.	(N = 17, x = 7)
8 months Post > 2 months Post	n.s.	(N = 15, x = 7)
8 months Post \geq 1 month Pre	n.s.	(N = 16, x = 8)

Continuous

2 months Post > 1 month Pre	n.s.	(N = 17, x = 5)
2 months Post \geq 8 months Post	n.s.	(N = 16, x = 8)
8 months Post > 1 month Pre	p = .022	(N = 16, x = 3)

Available

1 month Pre > 2 months Post	n.s.	(N = 16, x = 7)
8 months Post > 2 months Post	n.s.	(N = 15, x = 4)
8 months Post > 1 month Pre	n.s.	(N = 15, x = 7)

Comparisons of levels of interaction across visits:
Father's contribution (Sign test - 2 tailed)

Concentrated

1 month Pre > 2 months Post	n.s.	(N = 13, x = 6)
8 months Post > 2 months Post	n.s.	(N = 13, x = 6)
1 month Pre > 8 months Post	n.s.	(N = 14, x = 6)

Continuous

1 month Pre > 2 months Post	n.s.	(N = 11, x = 5)
2 months Post > 8 months Post	n.s.	(N = 9, x = 3)
1 month Pre > 8 months Post	n.s.	(N = 8, x = 2)

The fathers' contributions however, were not significantly different between any of the visits at the Concentrated or Continuous level of interaction. Only one father was recorded as having been Available for interaction at two of the three time periods considered, as such this category was left out of Table 6.4.

It could be that the children still felt insecure and therefore maintained proximity to mother when they were alone with her, or that they were more willing to interact at 8 months Post-birth compared to 1 month Pre-, but as this was only one significant result out of nine, and none of the fathers' contributions were significantly different between any two periods, it is felt that the emphasis is more on their respective contributions not being significantly different from before to after the birth. Together with the results in Table 6.1, there would seem to be strong individual differences either in the amount and intensity of interaction before the birth or after, or both.

3. Attention Score

Table 6.5a Comparisons of attention scores across visits

(Sign test - 2 tailed)

1 month Pre > 2 months Post	ns.	(N = 16, x = 4)
2 months Post > 8 months Post	ns.	(N = 16, x = 7)
1 month Pre > 8 months Post	p = .002	(N = 14, x = 1)

Table 6.5a shows that there was a near significant trend ($p = .076$) for first-borns to have more contacts with people

other than their mothers and fathers at 1 month before the birth compared to 2 months after, and at 1 month before significantly more than at 8 months after. Although in a few cases these contacts were grandparents and other relations, the majority tended to be the mothers' friends and their own children who were visited or themselves came to visit, for example in an afternoon. That these contacts occurred more before the birth than 2 months after is not too surprising. Shortly after the birth, there would undoubtedly have been more visitors, but at 2 months after, most visitors would have been to see the new baby. Most mothers also mentioned that they did not go out with their first-born after the birth as often as they had done before the baby was born. Apart from generally recovering from the birth, getting the first child, the baby and themselves ready to go out was often said to be a lengthy business. In addition, it was easier for mothers if outings did not clash with the baby's feeding times. This was more difficult to ensure in the early weeks, when most babies were not yet firmly established in routines. What is interesting is that with the mothers and first children going out and visiting less, they were in turn visited less after the birth.

Table 6.5b Correlations between age and attention scores at:

1 month	Pre	=	-.27	ns.
2 months	Post	=	-.31	ns.
8 months	Post	=	-.001	ns.

As would be expected, there was no significant relationship between a child's age and the number of persons he came into contact with before or after the birth (see Table 6.5b). The slightly negative trends at 1 month Pre- and at 2 months Post- were probably due to some of the older children who had low attention scores. Four of the older children in the sample attended nursery school, and for this period they were assigned the Available attention score.

Secondly, their low attention scores could have been partly due to the fact that while at home, they more than younger ones were often Available for interaction, and the Available category carried the least attention score.

4. Individual variation

With few significant results for the group of children as a whole, individual differences in the amount and type of attention given to individual children were indicated. Indeed Douglas et al (1968) found considerable variation between families in the samples they studied.

Figs. 6.2, 6.3 and 6.4 illustrate the direction of change from 1 month before the birth of the sibling through to 2 and 8 months after the birth, for the three levels of interaction. As no two periods at any level of interaction were significantly different (Table 6.1), the sketches in these Figures are employed merely to highlight individual variations.

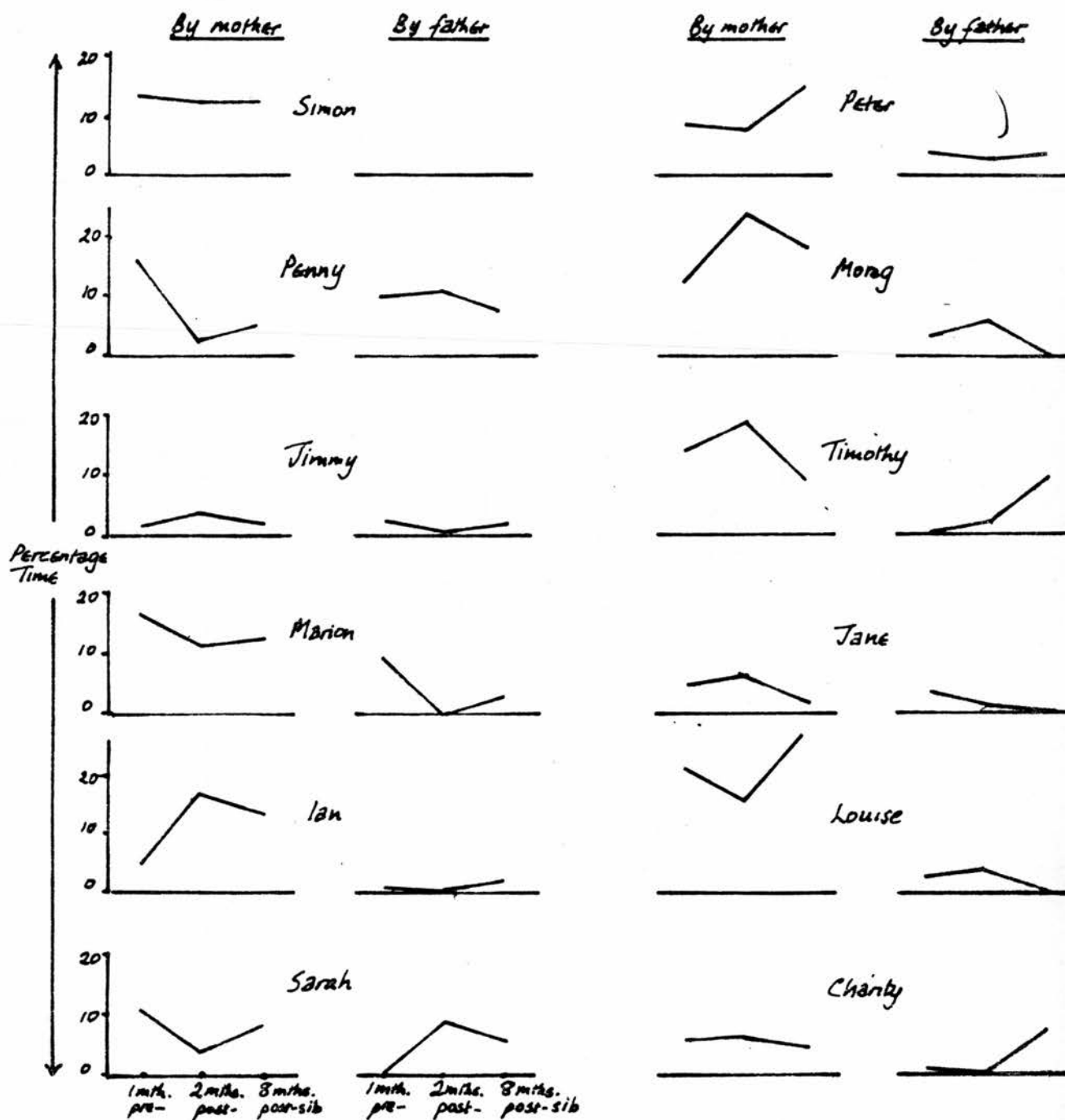
Perhaps the most striking feature of these sketches is that the majority of them fall into two distinct styles. These may be termed the V shape and the inverted V. They

respectively signify a smaller or greater degree of interaction at 2 months Post- as compared to 1 month Pre- and 8 months Post. That these changes occurred at 2 months Post- in the majority of cases, followed by a return at 8 months Post- to levels more similar to 1 month Pre-, is probably the most obvious representation of the effect of the birth of the sibling.

Concentrated interaction scores (for the mother) revealed the greatest proportion of birth-related patterns. Six out of sixteen showed the V shaped pattern and another six out of sixteen the inverted V pattern (see Fig.6.2. By mother). Thus for Concentrated interaction, out of sixteen sets of results, only four did not show a pattern most easily explained by the birth of the second child. For two of these four, that is Simon and Charity, the amount of Concentrated interaction with their mothers hardly changed from 1 month before through to 2 and 8 months after the birth. The other two, Martin and Thomas had slight increases over the same three periods.

For the Continuous category (see Fig.6.3), ten out of sixteen showed either the V or inverted V pattern. Four of the six exceptions were Penny, Ian, Peter and Charity, who showed a marked increase over the three time periods and thus obtained increasingly more Continuous attention. In contrast to this pattern was Timothy who got decreasingly less Continuous attention. Sarah had almost no change in Continuous attention between 1 month Pre- and 2 months Post-, and then obtained a sharp increase between 2 and 8 months Post.

FIG 6.2 Standard Day Interview: Percentage time devoted to concentrated interaction by mother and father separately, by subject and by age.



Note:

- 1) Subjects ordered by age from top to bottom of columns and left to right. Simon = youngest subject, Timothy = median age subject, Thomas (overleaf) = oldest subject
- 2) $N = 10$
- 3) In the majority of cases each mother's and father's contribution make up the total amount of concentrated attention given to the child at each visit. In a few cases, other persons contributed to the total. These 'other' contributions are not included here.

cont./

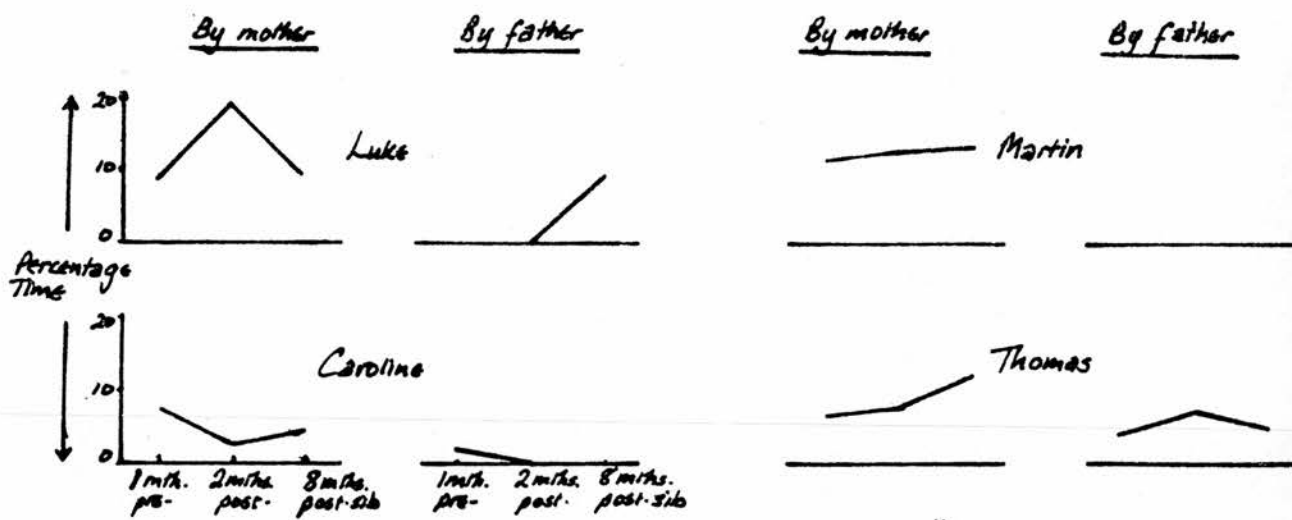
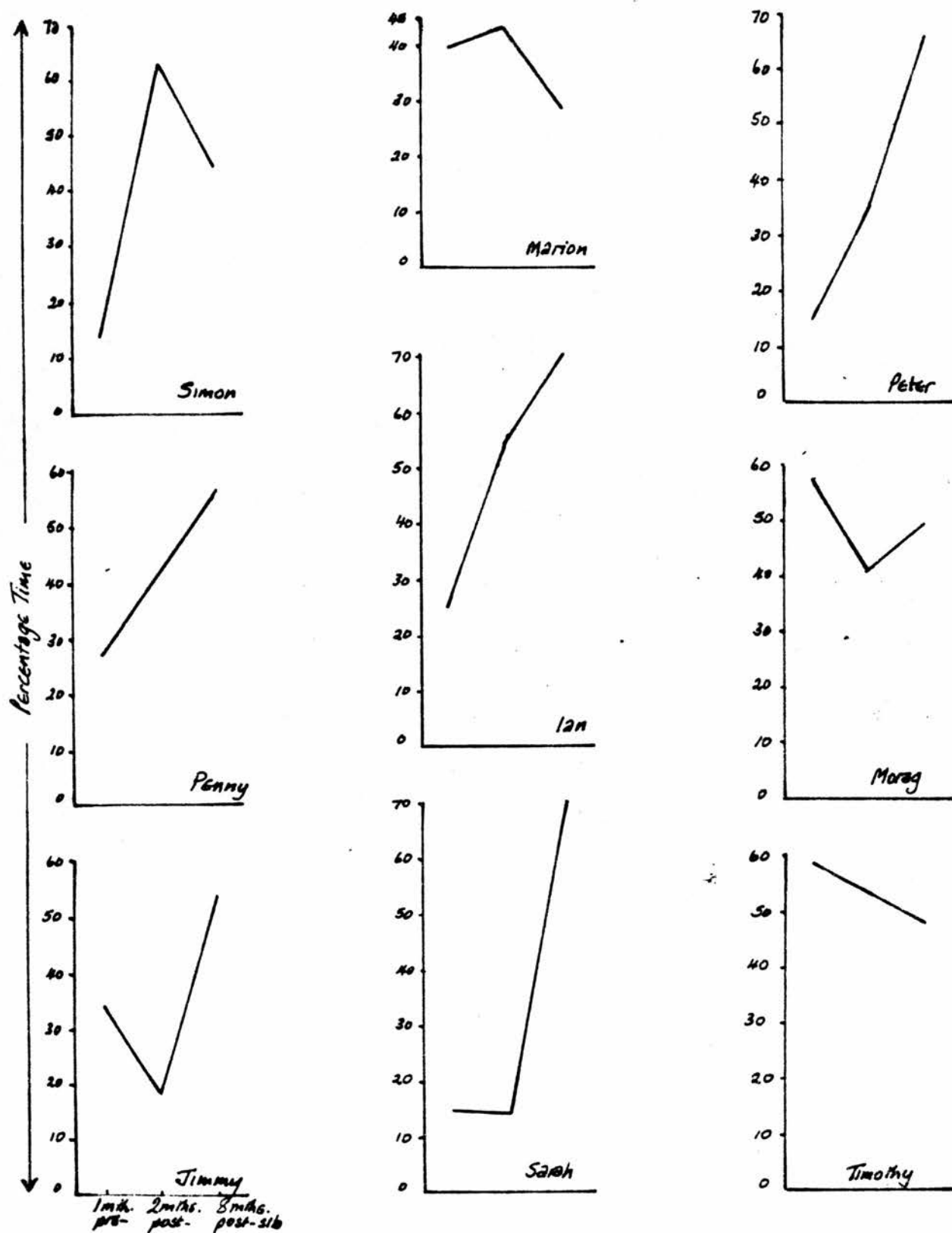
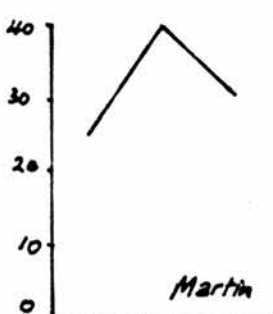
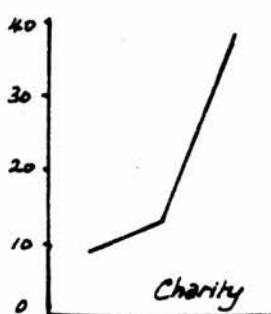
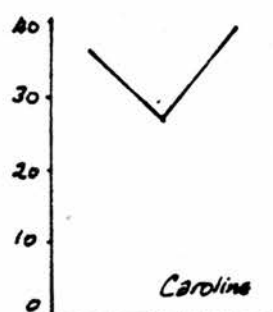
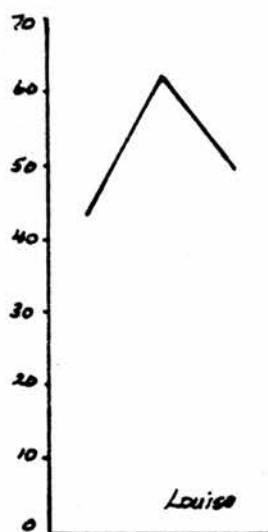
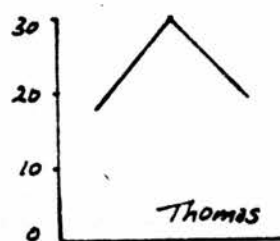
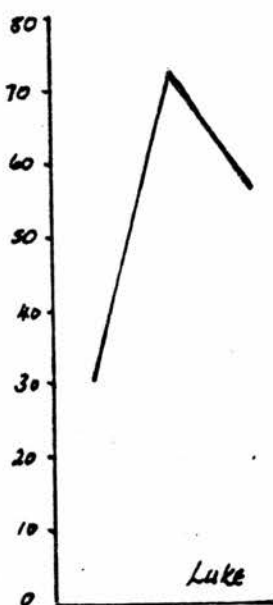
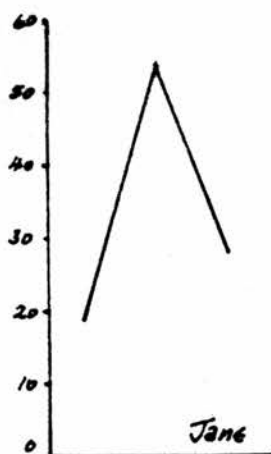
Fig. 6²
cont./

FIG 6.3 Standard Day Interview: Percentage time devoted to continuous interaction by mother only, by subject and by age.



Subjects ordered by age from top to bottom of columns and left to right. $N=16$

cont./



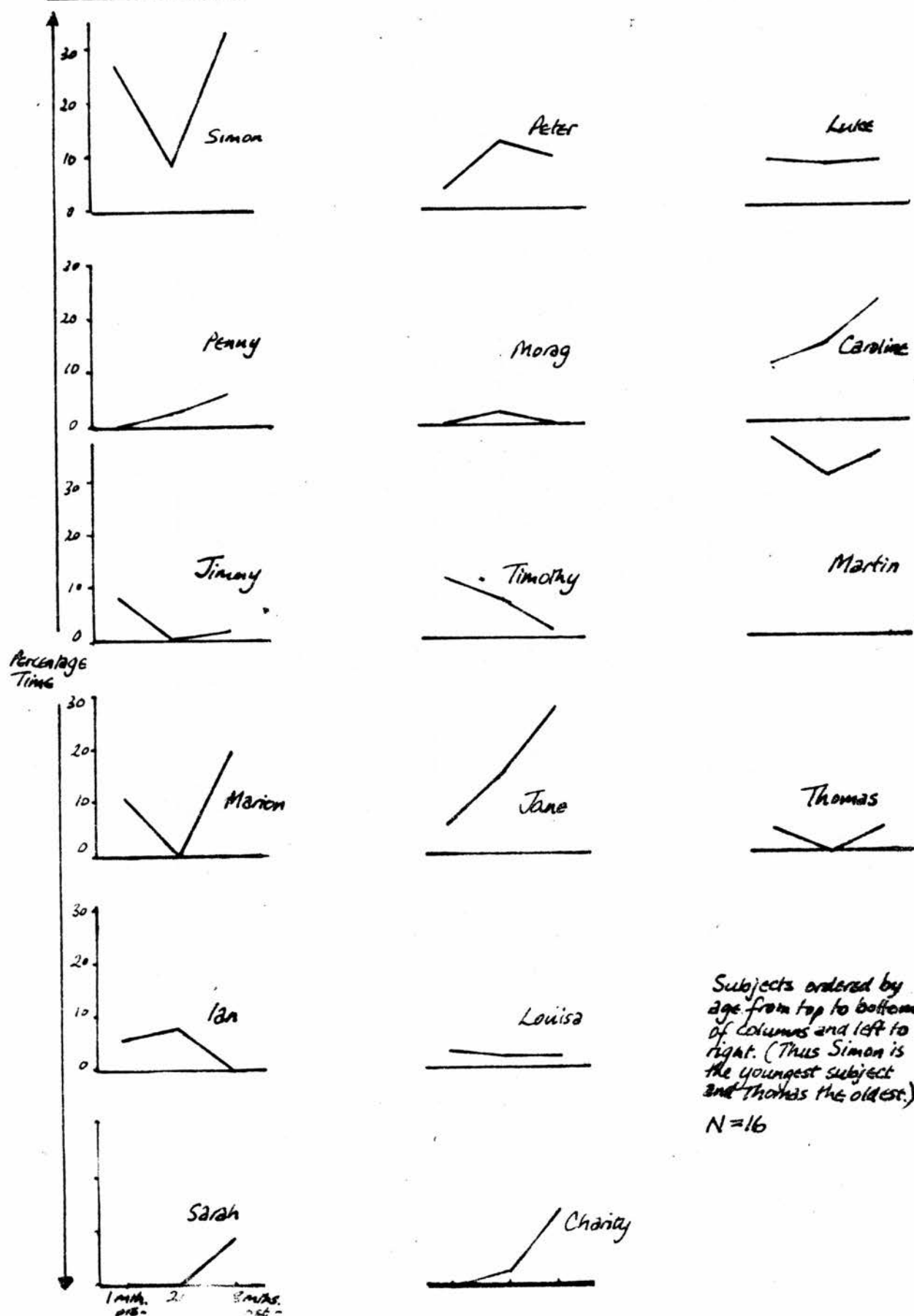
For the Available category (see Fig.6.4), eight out of sixteen showed either the V or inverted V pattern. That is, for half of the children there was either a decrease or an increase in Available interaction at two months Post / compared to 1 month Pre and 8 months Post. / Of the remaining half, Penny, Jane, Charity and Caroline showed a fairly gradual increase in Available interaction over the three periods. Timothy showed a gradual decline, for Sarah there was no change between 1 month Pre and 2 months Post and then an increase to 8 months Post, and for Louisa and Luke there was almost no change over the three periods.

It is interesting to note that Charity is the only one who emerged as an exception at all three levels of interaction. Penny showed an increase at both the Continuous and Available levels across the three periods, in contrast to Timothy who showed a decrease at both levels. Sarah was also consistent in showing no change between 1 month Pre and 2 months Post, and then an increase to 8 months Post for both the Continuous and Available categories.

To recapitulate for the mothers' scores, twelve out of sixteen for Concentrated, ten out of sixteen for Continuous and eight out of sixteen for Available interaction showed either the V or inverted V pattern at 2 months Post as compared to 1 month Pre and 8 months Post. In so far as there were changes at 2 months Post, it is suggested that some changes in care did occur after the birth compared to before, but that for different children there were different kinds of change.

Fig.6.2 shows the respective contributions by mothers and fathers to Concentrated interaction. It may be noticed that

FIG 6.4 Standard Day Interview: Percentage time when mother only is available for interaction.



within the V and inverted V patterns, there are two sub-patterns. These are firstly where the father's pattern is similar to the mother's pattern; secondly where the father's pattern is the inverse of the mother's pattern.

The first of these two may be said to indicate that both the father and the mother are behaving towards the first child after the birth of the second, in similar ways. The two clear examples of this are Morag and Marian. Whereas Morag is engaged in more Concentrated interaction by both her parents at two months Post, Marian is engaged in less from both her's and the father's contribution at this point is actually zero. While not denying the two children's individualities, and hence their possibly differing needs at this time, it seems reasonable to argue that in engaging Morag in more Concentrated interaction, her parents are minimising the effects of displacement brought about by the presence of the baby better than Marian's.

The second pattern, one of reciprocation between mother and father, implies that when the mother is devoting less to Concentrated interaction with her first child, at 2 months after the birth, the father partially makes up for it by an increase, and vice-versa. Clearly this pattern is both supportive and complementary, and was exhibited by the parents of Jimmy, Penny, Sarah and Louisa. Impressionistic observations of Penny's, Sarah's and Louisa's fathers revealed that not only were these fathers very involved in care-giving towards their daughters, they often shared household chores with their wives. This observation is however not exclusive to these fathers.

Apart from the two patterns already outlined, that is where the father's pattern is similar to the mother's, and where that of one partner is the inverse of the other's, a number of other patterns can be discerned as an examination of Fig.6.2 will show. These other patterns apply to ten out of the sixteen children in the group. Due to their variability however, they are not easily and neatly classifiable. For example, contributions by fathers in this group range from almost none over the three time periods, e.g. Ian's and Caroline's, to showing little change over the same periods, e.g. Peter's; to contributing most at 8 months Post e.g. Timothy's, Charity's and Luke's.

Two fathers never engaged in Concentrated interaction with their children during the time periods sampled for this study. They are Simon's and Martin's. While Simon's father was often away from home due to the nature of his work, and was in fact away when the interviews were done, the same was not true for Martin's.

While transcribing the interviews on which the foregoing results were based, two points became clear. Firstly, that some mothers had different styles of reporting events, and secondly that some children interrupted the interviews more than others.

The interviews required the mothers to report in detail activities that their children had been engaged in over the preceding 24 hours. For the most part the mothers did just that. However, some mothers in recounting their child's activities to the interviewer, often addressed the child as

well. Invariably this was accompanied by a change in tone or pitch. They 'included' or invited the child to participate. This process, which may be termed 'inclusion', may be illustrated by the following examples:

(a) M: ". . . she went down for a rest and didn't sleep. . .
so grand-dad got you up didn't he? Aha . . . and
put your dress on back to front didn't he? . . .
What a daft grand-dad."

C: "He is not."

M: "He is not no (Laughs) . . . and then you played
with mum didn't you? . . . and I did the vacuuming
didn't I?"

C: "Don't like that noise."

M: "You didn't like the noise you're quite right. . .
She doesn't like the noise of the vacuum cleaner."

(b) M: "Ross came to pick us up about half past 4 at the
pool and we got back by 5 and got Louisa ready for
bed. . . because she hadn't slept in the morning and
she was tired . . . and we got Sam ready for bed and
we fed them separately . . . yes they didn't have
tea with us last night they had their tea together
. . . and about half past 5 . . . and then Rupert . . .
did I read you a story last night?"

C: "Yes."

(N.B. . . . indicates a pause)

Examples (a) and (b) are quoted from a transcript of the same mother, and were originally narrated about five minutes apart. Except for the mother's first and last sentences, example (a) illustrates the process of 'inclusion'. The mother does this by using the pronoun "You . . ." and thereby addresses the child, rather than "she . . ."

The second way in which the mother 'includes' the child is by using the 'tag question', e.g. ". . . didn't you?" or ". . . didn't he?", to which the child may or may not reply.

In contrast to example (a), and with the exception of the mother's last sentence, example (b) does not involve 'inclusion'. However, this mother 'includes' frequently and her last sentence in example (b) conveniently illustrates the third way in which 'inclusion' can take place. This is by the mother asking the child a direct question. An alternative ending to example (b) could have been ". . . I am not sure if I read her a story last night". This would not be an example of 'inclusion'.

Although most mothers 'included' at some time or another, some appeared to adopt 'inclusion' as a style of interaction, while others did not. It is the attempts by the mother to 'include' that are of interest here, rather than the child's response to 'inclusion'.

Therefore a mother was said to engage in 'inclusion' either by use of the pronoun "you. . ." or tag question or by asking the child a direct question. If a statement including the pronoun you ended with a tag question, it was scored as

one instance of 'inclusion' rather than two. Thus a frequency score of 'inclusion' was obtained for each mother, for each interview. For ease and convenience, the separate 'inclusion' scores from each of the three interviews were summed to obtain one score for each mother. These scores were then ranked, and an arbitrary number of the four mothers who least and most included respectively, selected. The results are presented in Table 6.6a.

Table 6.6a Inclusion-ranks of mothers (by child's name) who:

<u>Least included</u>	<u>Most included</u>
1. Ian (25 months)	13. Thomas (52 months)
2. Sarah ($25\frac{3}{4}$ months)	14. Jimmy ($21\frac{3}{4}$ months)
3. Simon ($20\frac{1}{4}$ months)	15. Louisa ($33\frac{1}{2}$ months)
4. Marian ($22\frac{3}{4}$ months)	16. Charity (36 months)

(Children's ages given at 2 months Post)

Ian, the least 'included' child was the only one out of all 16 who never was once 'included' during all three interviews.

Sarah played outside during two out of the three interviews and Marian played at a distance during one of the interviews, as such they could not be 'included' at these times. However, other children also played at a distance and on occasion could not be included, but they are not amongst the four. Therefore distance was not totally critical.

Of the four children who were most 'included', Thomas's, Jimmy's and Louisa's mothers maintained relatively high levels of 'inclusion' across all three interviews. Charity was

'included' most at 8 months Post, and more than any other child at this interview.

Generally, older children tended to be 'included' more than younger ones, but this was not significant ($r_s = .46$).

The second and final point which struck the interviewer while transcribing the interviews, was the frequency with which some children engaged in behaviour that was interruptive to the flow of the interview. This varied from noisy banging and shouting which often got louder and louder as if trying to make the mother respond, to throwing things and just 'being naughty'. In general, disruptive behaviour appeared to be a form of attention seeking. The frequency with which individual children engaged in this interruptive behaviour was summed for the three interviews. Their scores were then ranked, and as with 'inclusion', the children who interrupted least and most respectively, were selected. The results are presented in Table 6.6b.

Table 6.6b Disruption-ranks of children who:

<u>Disrupted least</u>	<u>Disrupted most</u>
1. Jimmy ($21\frac{3}{4}$ months)	13. Ian (25 months)
2. Marian ($22\frac{3}{4}$ months)	14. Charity (36 months)
3. Jane ($30\frac{3}{4}$ months)	15. Thomas (52 months)
4. Timothy ($29\frac{3}{4}$ months)	16. Martin ($44\frac{1}{4}$ months)

Considering the ranks in Tables 6.6a and 6.6b together, it can be seen that Marian who was one of the least 'included' also disrupted least; but Ian, who was also least included

Thomas and Charity who were highly 'included', disrupted most. Both/were also highly disruptive, whereas Jimmy who was also highly 'included' was least disruptive. If we assume as was earlier suggested, that disruption is a form of attention-seeking, then children who are highly 'included' do not need to be disruptive, and vice-versa. This would make Thomas's and Charity's behaviour 'unadaptive', and possibly Marian's too.

However, the relationship between 'inclusion' and 'disruption' is probably not so simple nor so straightforward. The correlation between them was a low positive ($r_s = .28$), indicating weakly that the two tended to go together. Maybe when a child is 'included' he takes it to mean that he can join in. Certainly an adult would, though unlike the children here, probably not forcefully. Interestingly, older children disrupted significantly more than the younger ones ($r_s = .57$, $p < .05$).

DISCUSSION

The results presented in this chapter, broadly indicated that there was no significant change in the amount of Concentrated, Continuous or Available attention given to first-born children, from 1 month before to 8 months after the birth of the sibling. For the children as a group therefore, this finding did not support the basis on which this particular study was done. It was that the amount and type of attention children received would change upon the birth of a sibling.

Now the question is why there was no change for the group. There are three possible explanations. Firstly, the

original assumption that there would be change might have been wrong, and caregivers devote the same amount and kind of attention to the first child, whether or not there is a new sibling. Secondly, the quality of the attention may not have been adequately assessed in this study. For instance the emotional nature of the interactions could not be assessed by the technique used here, and in the next section this is given as one of the weaknesses of the Standard Day Interview. Thirdly and there appears to be evidence for this, strong individual differences occurred. Thus it was found that while some children obtained increases in attention, others obtained decreases. This was true for all the three levels of interaction, when any two time periods were compared. It was these combined increases and decreases that gave rise to the non-significant differences for the group, between periods. The obvious question is why for some children there were increases, and for others decreases. There are a number of possible factors. Some of these may have been the extent to which the first child was demanding of attention; whether the mother made an effort to devote more attention to the first child; the baby's temperament; the ease with which the baby could be settled after routine care-taking activities and thus release the mother to devote attention to the first child, the mother's own state; and the extent to which she was supported by the father in her role of care-giver. More of these factors relate to mothers because they more than anyone else spent most time with the children and gave most of the attention.

Unlike decreases and increases in attention, a measure less susceptible to multiple interpretations is 'inclusion'. This process was recognised relatively late, during transcription of the interviews. An individual who is introduced to another or to a group feels 'included', one who is not feels the 'exclusion'. The adult who is referred to as if he is not present may likely feel hurt, there is no reason to suppose a child thus treated would feel much differently. Frequent 'inclusion' by the mother, if done in a way in which the child can understand, may help the child to identify with his seniors and possibly encourage a sense of self-confidence.

In this work, 'inclusion' has been defined in terms of the mother's behaviour alone. To fully utilise the concept, it would be necessary to examine not only the ways in which the mother 'includes' and their frequency, but also the child's responses. The current analysis did not attempt this, but noticed that most children responded positively to their mother's 'inclusion'.

Whereas 'inclusion' was defined in terms of the mother's behaviour, interruption is the child's attempt to attract the adult's attention. In 'including' the mother invites the child into conversation, in interrupting the child forces his way in. Both these processes imply that the child at times feels some form of exclusion, and desires 'inclusion' in an adult-adult interaction.

Although a systematic analysis of the mother's responses to interruption was not done, most appeared to respond with varying degrees of understanding and tolerance, as often as

with prohibitions or suggestions for the child to engage in another activity. Not all children however, interrupted by for example, making repetitive noises. Some exhibited an 'acceptable' level of politeness - "Excuse me, I want to say something."

In this study, a low positive correlation between 'inclusion' and interruption was obtained. Although it was said that this result weakly suggested that these two behaviours tended to occur together, both the result and the interpretation need to be taken with caution. As was earlier mentioned, these behaviours were discovered rather late, and this study had not been designed to investigate them. Therefore, before a definitive statement can be made on the relationship between them, if indeed there is one, it would be necessary to investigate both phenomena fully. This investigation would seem profitable particularly because 'inclusion' and interruption do not completely describe all interaction involving mother, child and a third party.

(A discussion relating to individual differences in attention, 'inclusion' and interruption will be presented in Chapter 9, where an integration of individual styles and variations will be attempted.)

Limitations of the Standard Day Interview

Cooper and McNeil (1968) have pointed out one of the main limitations of the Standard Day Interview technique. They state that it "does not give a proper representation of the emotional qualities and verbal interchanges that so often

accompany the activities and interactions described" (p. 187). For example, knowing that a mother and child were engaged in Concentrated interaction does not tell us anything about their emotional states, nor whether they were pleasantly chatting, being supportive or critical of each other.

A second limitation is the inability to determine the initiator and terminator of interactions. For example, a child may be Available for interaction, because either he or the mother has moved away from the other. Although theoretically possible to determine, most mothers would feel harassed if for each bout of interaction, they had to recall who-initiated-and-terminated-what. It is difficult enough recalling events for the preceding 24 hours!

A third limitation connected with recall, and inherent in all interviews, is what is remembered and how it is remembered. By going over the 24 hours step by step with the mother, a number of problems concerned with retrospective recall are avoided; but the mother can still choose what to report and how. Douglas et al (1968) observed that mothers rarely reported some kinds of play, e.g. that a child had been engaged in 'pretend' games, humming or singing. In this study some mothers did mention fantasy games, but humming and singing were never reported. Another thing that no mother ever reported, until they were asked at the end of the interview, was kisses and cuddles with their children. The interviewer found it necessary to question the occurrence of kisses and cuddles after the first, second and third interview for each mother. Often the mothers recognised the omission. However, this

recognition had no effect on the second and third interviews, since no mother spontaneously reported kisses and cuddles. This supports a further finding by Douglas et al (1968), that mothers do not change their behaviour or information with practice or previous knowledge of the procedure.

In spite of the limitations presented above, the Standard Day Interview technique has yielded some interesting results. Cooper and McNeil (1968) cited earlier, have presented evidence showing that children of houseproud housewives engage in different kinds of interaction from their 'normal' controls.

As far as the results reported in this Chapter are concerned, their validity (or lack thereof) should show up when they are compared with those from other sources in this thesis. This will be attempted in Chapter 10.

Chapter 7

Mother-first child interaction - before and after the birth of a sibling

This chapter is divided into two parts:

- A. Unstructured observations which were done at three points in time: 3 months before, then 3 and 6 months after the birth of the sibling.
- B. Structured observations in which the mother was invited to play a game of skittles with her child. This was done on two occasions: 3 months before and 6 months after the birth.

A.

INTRODUCTION

It appears that the only study to have investigated mother-child interaction through home observations before and after the birth of a sibling, has been that by Dunn and Kendrick (1980a). Their results, based on observations between 1 to 3 months before and 2 to 3 weeks after the birth of the sibling, revealed a number of significant changes. Some of these were decreases in maternal showing and helping, and an increase in prohibitions after the birth. Children initiated more verbal interactions after the birth, and mother-child behaviours that were previously associated ceased to be after the birth.

However, as earlier mentioned (p. 7), these results were based on observations up till the third week post-birth, and whether this changed form of interaction was maintained, or whether the pattern reverted to that more similar to the pre-birth period is not known.* In the study to be presented here, observations were done from 3 months before to 6 months after the birth, at which point it was hoped that any changes would have stabilised.

METHOD

Subjects:

The same 17 children of the 'Main Sample' served as subjects. Their ages ranged from 15.25 to 47 months with a median age of 24.75 months when the first unstructured observation was done (i.e. 3 months pre-birth). By the third and last observation, the remaining 16 children were all 9 months older. Hence their ages then ranged from 24.25 to 56 months (median age 33.75 months).

Setting and procedure:

All observations were done in the home, and most lasted the maximum of 30 minutes each.

It was thought impractical to request that the mother keep the 3 or 6 month old sibling out of sight or otherwise. Thus during some observations the baby was present, and absent in others.

All the verbal interchanges between mother and child (and utterances directed by either at the baby) were recorded on a portable tape-recorder. As the tape recording was in progress,

* But see Chapter 10 p. 347.

the observer wrote down in narrative form a continuing record of mother and child nonverbal behaviours, using precoded categories. The categories included child crying, playing with objects, approaching and following mother; mother looking at child, being affectionate and leaving the child. For the complete range of categories used and their definitions, see Classification and Description of Acts (pp.244 -249).

Every 10 seconds a bleeper gave a signal through an ear-piece worn in the observer's ear, at which point the observer moved down one line on the record sheet. A vertical line indicated that a behaviour was continuous over a specific time period.

At a later date, the non-verbal behaviour records were analysed in terms of frequencies and/or durations, and the verbal interchanges on the tapes transcribed verbatim.

ANALYSIS

Of the non-speech acts that will be referred to in the results section, Cries, Fuss, Smile and Looking were scored in terms of frequencies, and Joint Activity and Play (with objects) in terms of duration. The Distance the children maintained from their mothers was noted down every 10 seconds and later converted into a weighted score in which values of 1 to 4 were assigned to the distance measures of Close to Out of Sight. Thus each child had one distance score for each visit.

Mother and child utterances were classified into categories. These categories were based not so much on the

superficial structure of an utterance, but on its underlying meaning, in context. That is, the intention behind the utterance, its function, was the basis for classification. An example may make this point clearer. Consider the utterance: "Yes". Without knowledge of what preceded it, it would not be possible to determine its correct meaning. However, knowing that it was preceded by: "Did you just make that?" or "It's raining"; or "Can you move that over?" - makes it possible to assign the correct meaning. In this case: an answer to a question (Information 1), an acknowledgement of a comment (Agree 1) and following a directive (Comply 1).

A target utterance was classified then according to:

- (a) the speaker's utterance that preceded it;
- (b) the utterance that followed it, if it was by the original speaker and on the 'same theme';
- (c) intonation pattern;
- (d) a non-verbal act that preceded the utterance, or an ongoing activity.

As with Gelman and Shatz (1977) who used some of these features for classification, the extent to which any or all were used to classify a particular utterance varied. Some utterances were relatively straightforward and therefore easier to classify than others. Any utterance that could not be classified was put in category C99 (Unclassifiable).

The validity of the observer's interpretation of the meaning of utterances was tested by doing intra-observer reliability. This rather than inter-observer reliability was done since differences with another categoriser would have

confused differences due to familiarity with the classification with system-reliability. As can be seen (p.250-276), the system of classification was rather extensive and known best to the investigator. Re-classification of utterances done about 18 months apart, when the original classification could not have been recalled yielded the following results:

M-C pair	1	2	3	4	5	
N (utterances)	40	40	40	40	40	(Total 200)
Percent agreement	77.5	72.5	82.5	77.5	92.5	(Average 80.5%)

The average percent agreement of 80.5 is thought to be fairly acceptable, especially in the light of the intervening period.

At the end of this ^{chapter} the categories that were used are presented. First are the non-verbal (Classification and Description of Acts), and second the verbal (Classification and Description of Utterances). In each case, a plan or layout is given to show the order in which the categories and their definitions are presented.

(To test for statistical significance, a 2 tailed Sign test was used.)

RESULTS

Unit utterance = a word, phrase or sentence that conveys meaning, often marked by a natural pause.

Number categories used = the total number of different categories used by a mother or child during an observation.

The following questions are asked of the data:

1. Are there differences in the frequencies of mother and child behaviours separately, when the three time periods are compared each with the other?
- 2.(a) Do mothers interact differently with children of different ages at the three time periods? (b) Are child behaviours related to age? (c) Are the differences in 1. above related to age?
3. When the frequencies of two levels of the same category differing only in intensity (e.g. Organise +1 and Organise +2) or frequencies of two categories that are diametrically opposite (e.g. Comply 1 and No Comply 1) are compared, do mothers and children separately consistently function at one of the two levels and at one of the two extremes at the three time periods?
4. Are there marked individual differences in mother and child behaviours at 3 months Pre, 3 and 6 months Post-birth?

1. Mother Behaviours

A total of 38 comparisons were done between each of the three time periods. Their selection was based on either those measures that occurred frequently amongst most mothers (e.g. Organise), those that were thought would be different from before to after the birth (e.g. Comply 1) or those that were inherently important as indicators of the mother-child relationship (e.g. Nurturance).

Table 7.1a presents the results of measures on which significant differences were obtained. The majority of the measures were not significantly different between any two time

periods, and a list of these measures is presented in Appendix 5 a. Table 7.1a shows that all the comparisons between 3 Pre and 3 Post, and 3 Post and 6 Post yielded results that were significant either at 3 Pre or 6 Post more than at 3 Post. Some of these significant findings were that in speaking to their children, mothers identified objects by name, and repeated their own utterances more at 3 months pre- than at 3 months post-birth. Both these findings are probably related to age, as the children were six months younger at the former period compared to the latter, but it could also be that these were behaviours that changed due to the sibling birth. Mothers also talked about objects, events and other persons (Comment object), smiled at their children, praised their actions (Judgement +1; Judgement +2), sought clarification of their children's utterances (Request 3), generally talked to them (total unit utterances), and used a greater number of categories, all these either at 3 Pre or 6 Post more than at 3 Post. The one point to note is that all these are 'positive' behaviours. Although they are only a small number, as such one cannot draw conclusions, they appear to reflect a degree of positive involvement on the part of mothers, more at 3 Pre and 6 Post than at 3 months Post-birth. In fact it may be noticed (see Table 7.1a) that no one single behaviour occurred significantly more at 3 months Post-birth, and certainly none of the ones that may be regarded as 'positive'. This suggests that there was a marked disturbance in the interactions of mothers and children at 3 months Post.

Generally, there was not much difference in mother's behaviour between 3 Pre and 6 Post. Repeat which occurred significantly more at 3 Pre compared to 3 Post, just missed significance when 3 Pre was compared to 6 Post. While it was suggested that the former result might have been due to age, the latter cannot be explained solely in terms of age. If age was the responsible factor, then the latter result would have been even more significant. There was a longer time interval in the latter comparison compared to the former. Play (fantasy) which was almost significant at 3 Pre compared to 3 Post ($p = .058$), occurred significantly more at 3 Pre compared to 6 Post. This finding is difficult to explain, and if it was not due to the birth then some other factor which at the moment is unidentifiable must account for the result.

In the light of the changes in mother behaviours that have been reported by other workers (e.g. Taylor and Kogan 1973; Dunn and Kendrick 1980a), those found here can only be described as sparse. However, rather than believe that the mothers studied here showed little change from before to after the birth, it is suggested that this observation be postponed until qualitative comparisons and other results have been presented. Quantitative ones as has been seen, showed little change from before to after the birth.

Child Behaviours

A total of 33 comparisons were done between each of the three time periods. The criteria for selecting the 33 measures were firstly that they were used by a fair number of

the children (e.g. Show 1, Disagree 1). However, with the age range of the children studied here, it was inevitable that some measures would apply more to the younger children and others more to the older children. The second criterion was speculative, and related to measures that were supposed would show differences from before to after the birth (e.g. Request 2, No Comply 1). Both criteria could of course apply to the same category.

Table 7.1b shows that very few comparisons were significant, and fewer even than for the mothers. The measures that were not significantly different between any two periods are listed in Appendix 5a. Comparisons between 3 months Pre and 3 months Post yielded no significant differences. This result was unexpected as one would suppose that some of the children's behaviours would have been different from 3 months before to 3 months after the birth of the sibling.

Comparisons between 3 months Post and 6 months Post also yielded no significant results, except one. It was that children talked about their own actions (Comment self 2) more at 6 months Post than at 3 months Post. Therefore the marked difference in mothers' behaviours at 3 Pre and at 6 Post compared to 3 Post, was not found for the children's behaviours.

The highest number of significant results between any two time periods, which was only four, was obtained for the comparisons between 3 months Pre and 6 months Post birth. Two of these were, children commented on their mothers' actions (Comment other 2) and made polite requests (Request 1) more at 6 months Post than at 3 months Pre. It is very likely that the

Table 7.1a Quantitative Comparisons of Categories: Mothers

	3 Pre vs. 3 Post	3 Post vs. 6 Post	3 Pre vs. 6 Post
Total unit utterances	3Pre>3Post p=.012	6Post>3Post ns.	3Pre>6Post ns.
No. categories used	3Pre>3Post ns.	6Post>3Post p=.022	6Post>3Pre ns.
Name	3Pre>3Post p=.012	6Post>3Post ns.	3Pre>6Post ns.
Comment other 1	3Post>3Pre ns.	6Post>3Post ns.	6Post>3Pre p = .022
Comment object	3Pre>3Post p=.012	3Post>3Post ns.	6Post>3Pre ns.
Question 3	3Pre>3Post ns.	3Post>6Post ns.	3Pre>6Post p = .036
Repeat	3Pre>3Post p=.05	3Post>6Post ns.	3Pre>6Post ns. (p=.058)
Request 3	3Pre>3Post ns.	6Post>3Post p=.036	6Post>3Pre ns.
Judgement +1	3Pre>3Post p=.036	6Post>3Post ns.	6Post>3Pre ns.
Judgement +2	3Pre>3Post ns.	6 Post>3Post p=.022	6Post>3Pre ns.
Play (fantasy)	3Pre>3Post ns. (p=.058)	6Post>3Post ns.	3Pre>6Post p = .012
Smile	3Pre>3Post p=.022	6Post>3Post p=.012	6Post>3Pre ns.

Table 7.1b Quantitative Comparisons of Categories: Children

Comment Self 2	3Pre>3Post ns.	6Post>3Post p=.004	6Post>3Pre p = .022
Comment other 2	3Post>3Pre ns.	6Post>3Post ns.	6Post>3Pre p = .002
Request 1	3Pre>3Post ns.	6Post>3Post ns.	6Post>3Pre p = .038
Repeat	3Pre>3Post ns.	3Post>6Post ns.	3Pre>6Post p < .004

increase in these two behaviours at 6 months Post was more to do with age than the birth of the sibling. The third was that they commented on their own actions at 6 Post more than at 3 Pre. Thus at 6 months Post, children talked about their own activities more than they had done both at 3 Pre and at 3 Post. That the children repeated their own utterances more at 3 Pre than at 6 Post is the fourth finding, and one that was also probably due to age.

Considering the total number of comparisons that were done, it can be seen that few were significant. It can be assumed therefore, that either the children studied here were not as affected by the birth of the sibling as the studies of other children have shown (e.g. Dunn and Kendrick 1980a), or that they were affected in ways that were not quantifiable. Results in the next sections should verify either assumption.

Summary:

Few mother and child behaviours were quantitatively different when 3 months Pre, 3 and 6 months Post were compared each with the other. For both mothers and children, no one behaviour occurred significantly more at 3 months Post when compared with 3 months Pre or 6 months Post.

2. First children's ages and mothers' behaviours

Table 7.2a presents the correlations between children's ages and the mothers' scores at 3 months Pre, 3 and 6 months Post. Measures on which no significant correlations were

obtained at any of the three periods are listed in Appendix 5b.

As can be seen from Table 7.2a, no one behaviour was significantly correlated with age at all three time periods, and most were significantly correlated only at 3 months Pre. This suggests that there was a tendency for mothers to interact differently with children of different ages, more before the birth than after.

Information 1 (e.g. direct answers to questions) was significantly and positively related to age at 3 months Pre and 6 Post. That this association should be positive is not surprising, the older a child gets the better able he is to ask questions, and the more likely it is that he will get answers to these questions. Why the correlation was not significant at 3 months Post however, is a point that will be taken up later. In addition to answering questions while interacting with the older children, mothers briefly acknowledged their utterances (Agree 1), disagreed with them, and delayed complying (Comply 2), all significantly at 3 months Pre. At 3 and 6 months Post, the significant correlations with age all disappeared. Tag questions (Question 5) and No Comply 1 which were both positively related to age and nearly significant at 3 months Pre, had this age-relation effectively disrupted at 3 Post. At 6 Post however, the positive associations between these two behaviours and age re-emerged, but were not significant.

In relation to the younger children, mothers named objects, repeated themselves, were more nurturant and smiled at them more, all at 3 months Pre. Although most of the

trends were maintained, neither of the four significant correlations were obtained at 3 months Post nor at 6 months Post. Still in relation to the younger children, two correlations that were not significant at the earlier times, became significant at 6 months Post. Thus mothers in acknowledging the younger children's utterances employed the extended form (Agree 2) and also sought clarification of what they said (Request 3) more than with the older children, thus indicating the emergence of a new age trend, presumably beginning at about 35-40 months. At 3 months Post the correlation between age and Request 3 was a fairly high negative, but was not significant.

Now to turn to the other question (2c), and to the behaviours that occurred either at 3 Pre or 6 Post more than at 3 Post. That mothers named objects, repeated their own utterances, smiled at their children and requested clarification or confirmation of what was said (Request 3) were all more marked towards the younger children. However, comments about events and situations (Comment object), praising children's actions (Judgement +1; Judgement +2), talking to them, number of categories used and smiling at them (6 Post > 3 Post), were all not related to the children's ages.

It will be remembered that these positive behaviours tended to occur less frequently anyway at 3 months post birth than either 3 Pre or 6 Post.

Play (fantasy) and teaching questions (Question 3), both of which occurred significantly more at 3 Pre compared to 6 Post were not related to age, neither was Comment other 1 which

occurred more at 6 Post than at 3 Pre.

In summary, a number of mother behaviours that were related to age at 3 months Pre were not related at 3 months Post. On a number of behaviours therefore, the mothers behaved differently with children of different ages before the birth, but after the birth these distinctions were disrupted. Of the few significant differences that were obtained in mothers' behaviours from before to after the birth, more tended not to be related to the children's age (8 vs. 4).

First children's ages and first children's behaviour

Table 7.2b presents correlations between children's ages and scores on various behaviours. Behaviours that were not significantly correlated with age at any of the three periods are listed in Appendix 5b. Overall it can be seen (Table 7.2b) that most correlations were significant at one period and not at the others, and the majority were positively related to age.

Repeat was the only behaviour which was significantly correlated at all three periods, and was negative. The only other behaviour that was significantly and negatively correlated with age was Name. However this was significant only at 3 months Pre and at 6 months Post, although the negative trend was maintained at 3 months Post. Therefore younger children were generally consistent in repeating their own utterances and in identifying objects by name over the three periods.

Older children on the other hand engaged in more age-related behaviours, but none of these age-relations were maintained over the three periods, and most appear to have been

disrupted after 3 months Pre-birth. Those that were significant at 3 months Pre, but had this association severely disrupted at the later periods were Number of categories used, Comment object, Agree 1, Information 1, Organise +2 and No Comply 1. It is not immediately obvious what these categories have in common, except perhaps for Comment object, Agree 1 and Information 1 being 'interactive' and 'positive'. But what is even less obvious is why the age relations were disrupted. We will return to this point later.

Another four categories were significant at 3 months Pre, and for one (Question 2) also at 3 months Post. The other three were either nearly significant (No Comply 2) or maintained correlations that were high enough to have been almost significant (Request 3, Play (fantasy)), all at 3 months Post. At 6 months Post, the age relations were almost zero on Question 2 and Play (fantasy), and reduced on Request 3 and No Comply 2. Why the age relations were more disturbed at 6 months Post is not clear, but it may be noticed that the correlations for all four measures linearly decreased across all three time periods.

In answer to question 2c, and to correct a suggestion earlier made, age was not a significant factor in the findings that children commented on their mothers' actions (Comment other 2), and made polite requests (Request 1) more at 6 months Post than at 3 months Pre. Both behaviours were very weakly related to age at 6 Post. Although there was a slight tendency for older children more than younger ones to talk about their own activities at 6 Post, the finding that Comment self 2 occurred significantly more at 6 months Post compared

Table 7.2a Correlations between Children's ages and Mothers'
Scores for 3 Pre, 3 Post and 6 Post

<u>Categories</u>	<u>3 Pre</u>	<u>3 Post</u>	<u>6 Post</u>
Information 1	.85 *****	.39	.66 ****
Name	-.51 **	-.20	-.23
Agree 1	.51 **	.11	-.04
Disagree 1	.58 **	.02	-.36
Repeat	-.68 *****	-.47	-.23
Comply 2	.51 **	-.09	.31
Nurturance	-.51 **	-.42	-.13
Smile	-.55 **	.02	-.02
Agree 2	-.08	-.17	-.51 **
Request 3	.02	-.42	-.58 **
Question 5	.49 *	-.17	.35
No Comply 1	.49 *	.18	.40

Table 7.2b Correlations between Children's ages and Children's
Scores for 3 Pre, 3 Post and 6 Post

<u>Categories</u>	<u>3 Pre</u>	<u>3 Post</u>	<u>6 Post</u>
Repeat	-.78 *****	-.65 *****	-.66 *****
Name	-.52 **	-.35	-.65 *****
Disagree 1	.73 *****	.28	.58 **
Question 4	.74 *****	.39	.63 ***
Question 2	.65 *****	.52 **	.03
No. categories used	.85 *****	.19	-.03
Comment object	.61 ***	-.32	.10
Agree 1	.58 **	.13	.16
Information	.75 *****	-.23	-.07
Request 3	.51 **	.47	.24
Organise +2	.68 *****	-.02	.01
No Comply 1	.55 **	-.27	.09
No Comply 2	.66 *****	.49 *	.37
Play (fantasy)	.55 **	.48	.01
Question 5	.40	.63 ***	.26
Organise +1	.44	.26	.51 **
Smile	-.21	.31	.51 **

* nearly significant

** $p \leq .05$

*** $p \leq .02$

**** $p \leq .01$

***** $p \leq .001$

to both 3 months Pre and 3 months Post was not significantly due to age either. The final and only finding in which the effect of age was marked, was to do with repetition. Thus that children repeated their utterances more at 3 months Pre than at 6 months Post was more attributable to the younger children.

To conclude therefore, the results that have been presented here mainly show discontinuities between age and behaviour. Further, these discontinuities or disruptions occurred more in the older children than the younger. It may well be that this is the course of development, but with so many disruptions occurring after the birth of the sibling, it is more than likely that the birth caused these disruptions in age-relations. Amongst the four behaviours that were significantly different from before to after the birth, there was a tendency for the differences not to be due to age (3 vs. 1).

Regressions

For both mothers' and children's behaviours, the disruptions in correlations that occurred at 3 months Post can hardly be over emphasised. To illustrate these disruptions specifically, and the disturbances that occurred after the birth in general, age regressions are presented.

Most of these regression diagrams show that there is a

greater similarity between 3 Pre and 6 Post than either to 3 Post. This is more marked in those showing the 3 Post disruption in trends (Fig. 7.1a to 7.1r). In many instances, trends whose correlations were not significant, were also disrupted at 3 Post. Show 1: M, Comment other 1: M, Organise +2: M and Attention-seeking: C (Figs. 7.1 g, h, i, q), are a few of the examples presented. It is suggested, that these trend lines are more sensitive measures of differences than mere frequency counts, because, given the age distribution in this sample, these trend lines (age regressions) take into account individual variance. Further, the disruptions in age correlations at 3 months Post, supports the idea of increased variability amongst individuals at this period.

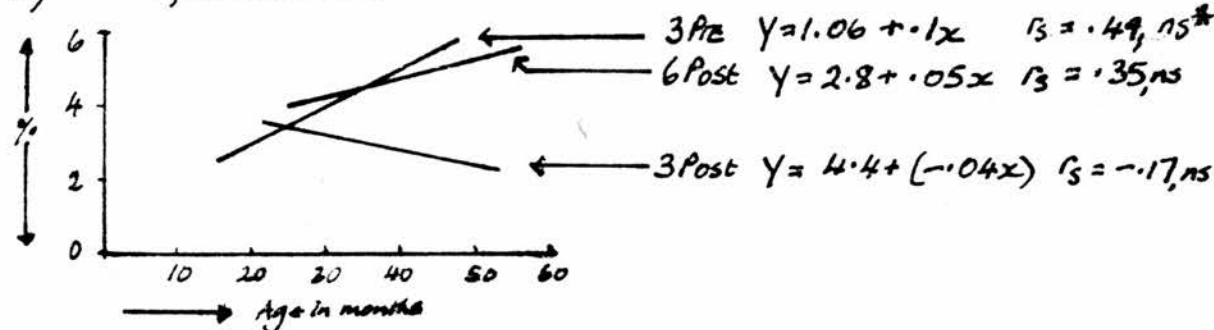
Most of Figs. 7.1s to 7.1z show linear reductions in age significance with time. Some of the behaviours show age related changes early on, e.g. Question 2: C and Repeat: M, and then appear to reach a plateau about 35 months, whereas others e.g. Request 3: M only show an age trend at the later period, thus in a sense emerging from a plateau. These age related behaviours show little real differences which can be attributed to the birth of the sibling.

Lastly, two child behaviours, Name and Repeat, show age trends (being less evident in older children) which are maintained solidly, throughout the observations.

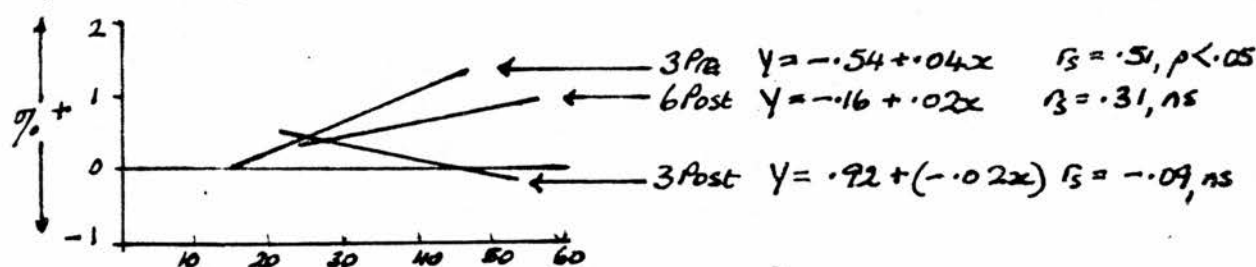
FIG 7.1 Age regressions: 3 Post disruptions in trends.

m = mother behavior

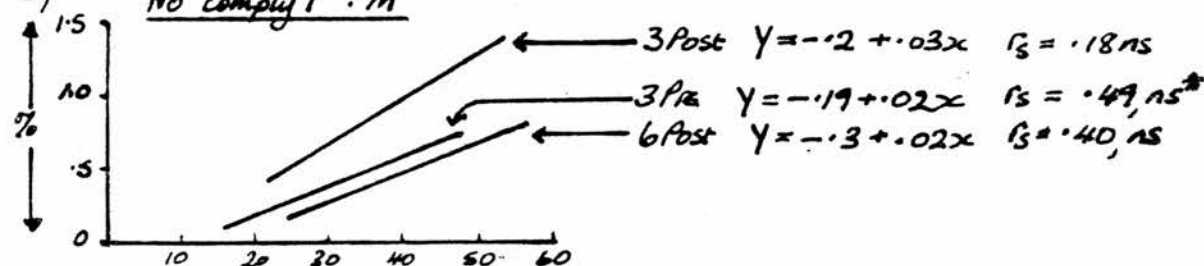
a) Question 5: m



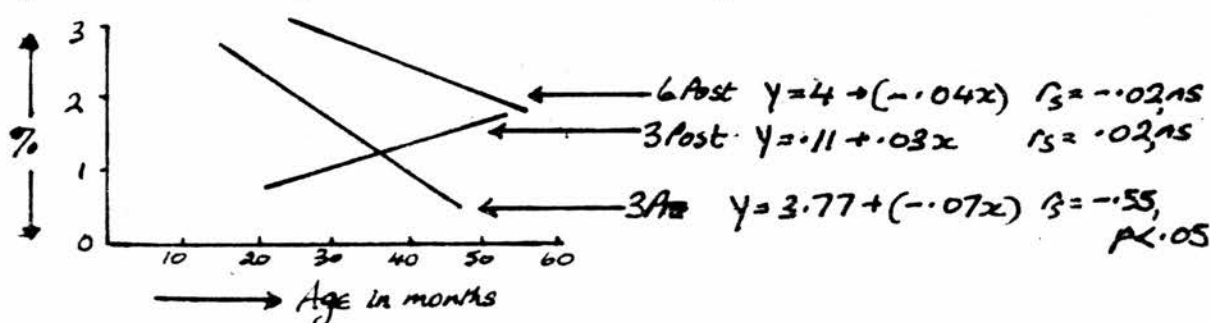
b) Comply 2: m



c) No comply 1: m

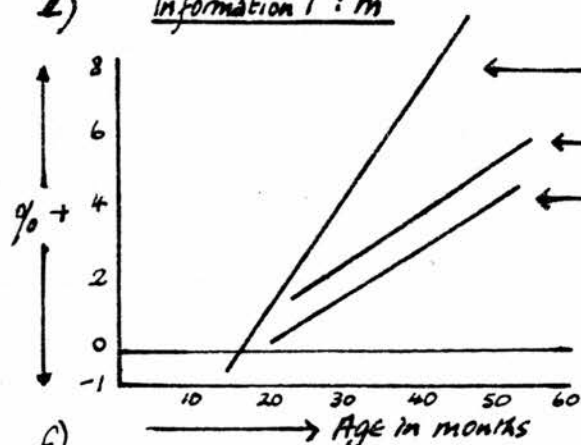


d) Smile: m



* = nearly significant

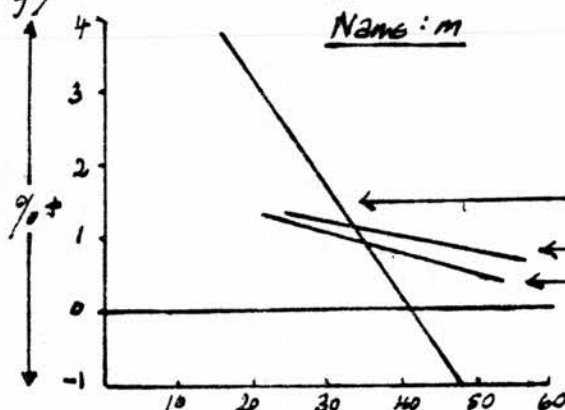
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e) Information 1 : m

$$3Pre \quad Y = -5.01 + .3x \quad r_s = .85, p < .001$$

$$6Post \quad Y = -1.99 + .14x \quad r_s = .66, p < .01$$

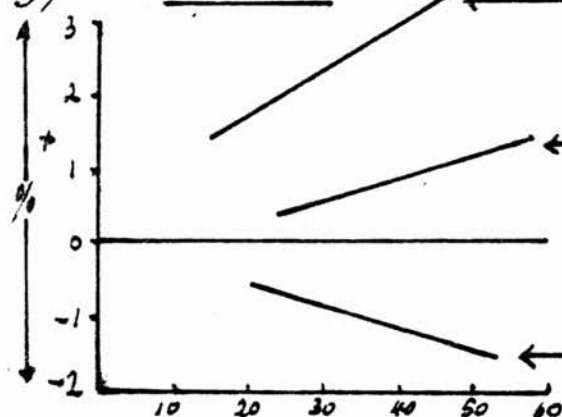
$$3Abst \quad Y = -2.53 + .13x \quad r_s = .39, ns$$

f) Name : m

$$3Pre \quad Y = 6.05 + (-.15x) \quad r_s = -.51, p < .05$$

$$6Post \quad Y = 1.81 + (-.02x) \quad r_s = -.23, ns$$

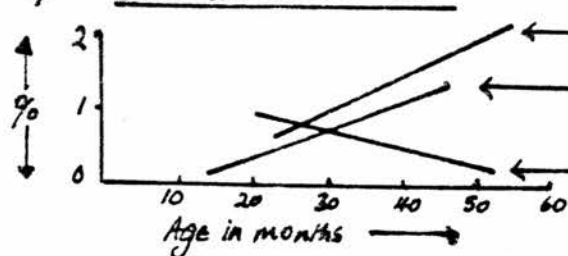
$$3Abst \quad Y = 1.97 + (-.03x) \quad r_s = -.20, ns$$

g) Show 1 : m

$$3Pre \quad Y = .55 + .06x \quad r_s = .13, ns$$

$$6Post \quad Y = -.31 + .03x \quad r_s = .30, ns$$

$$3Abst \quad Y = .08 + (-.03x) \quad r_s = -.14, ns$$

h) Comment other 1 : m

$$6Post \quad Y = -.54 + .05x \quad r_s = .14, ns$$

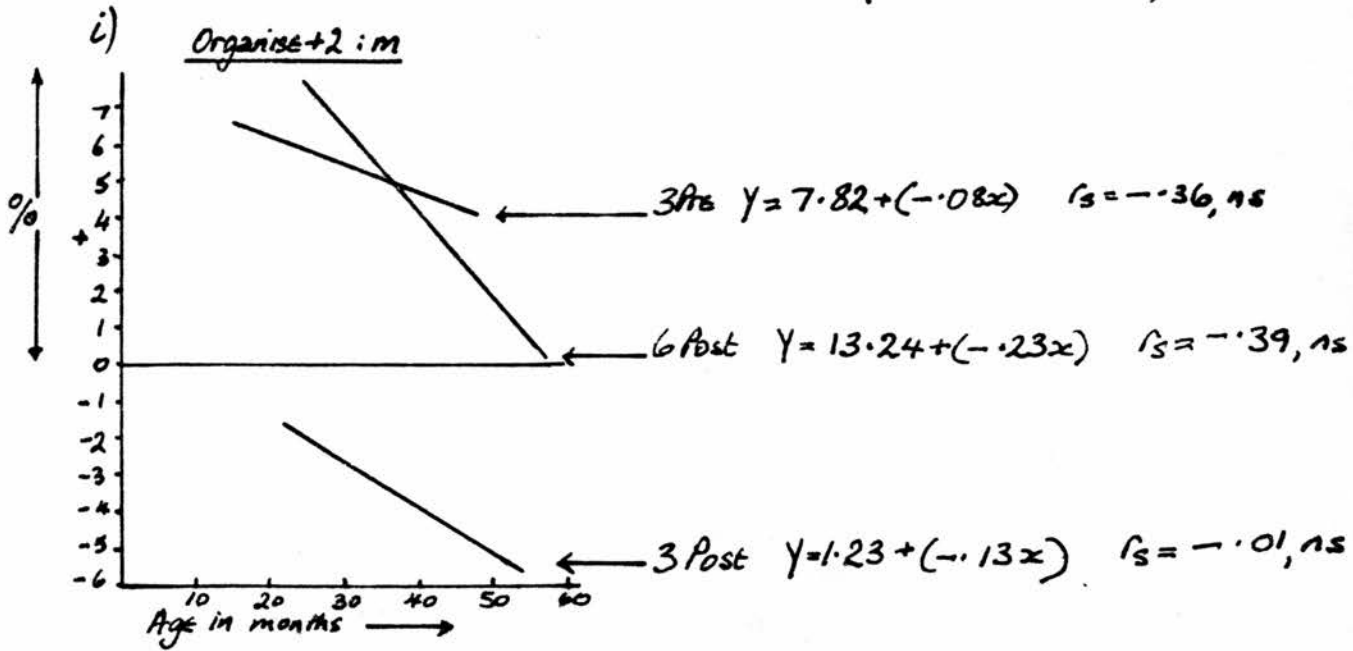
$$3Pre \quad Y = -.5 + .04x \quad r_s = .21, ns$$

$$3Abst \quad Y = 1.33 + (-.02x) \quad r_s = -.06, ns$$

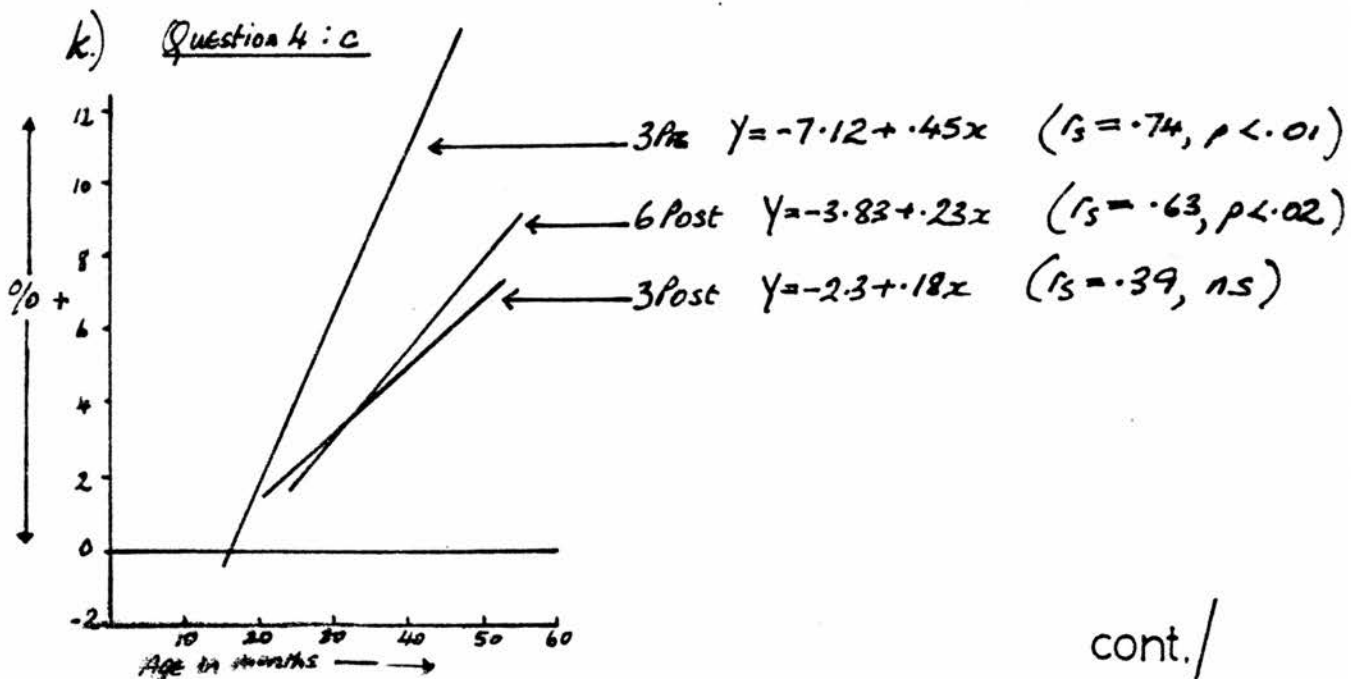
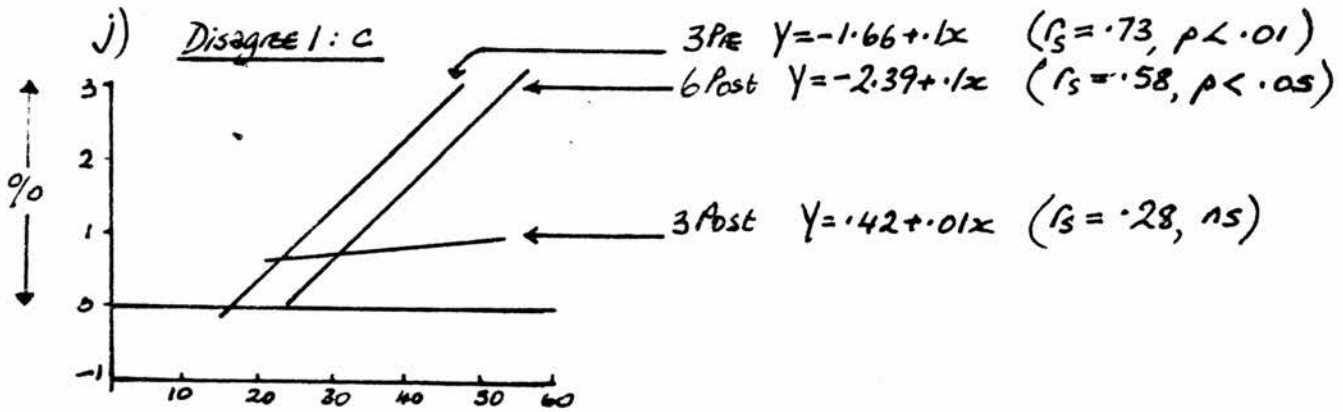
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cont./

(m = mother behavior)



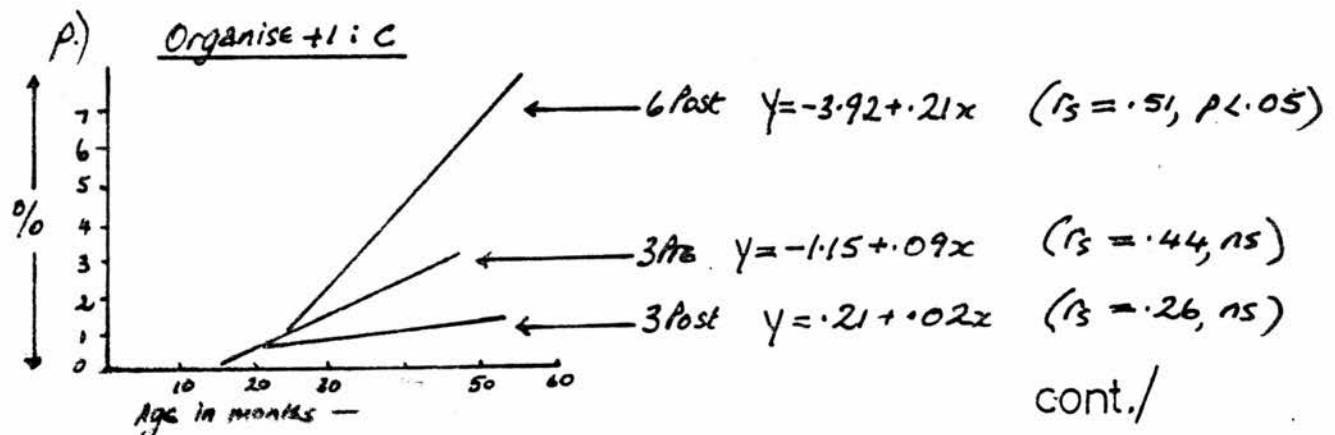
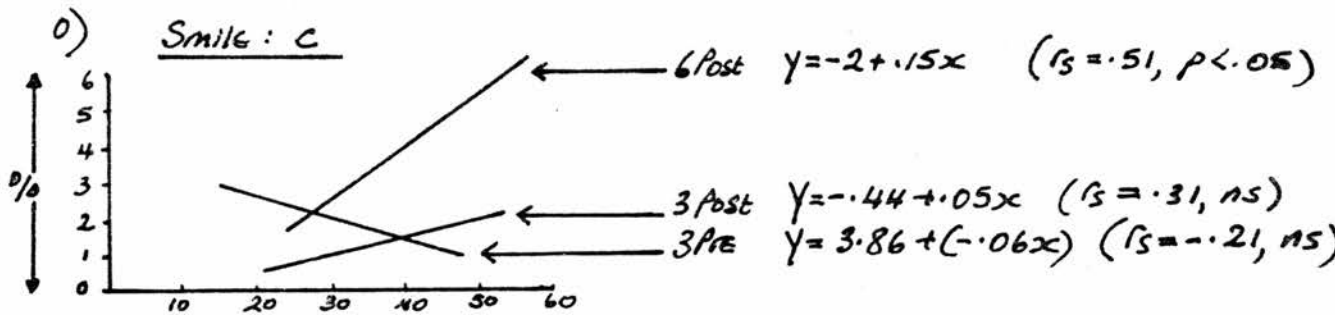
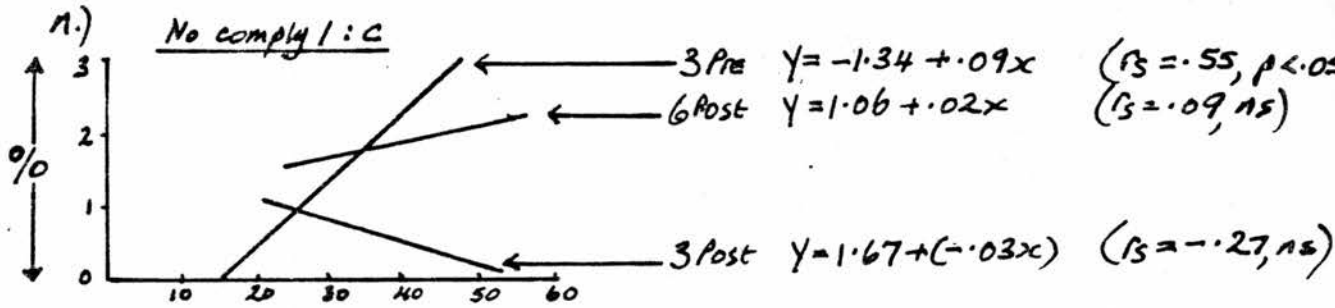
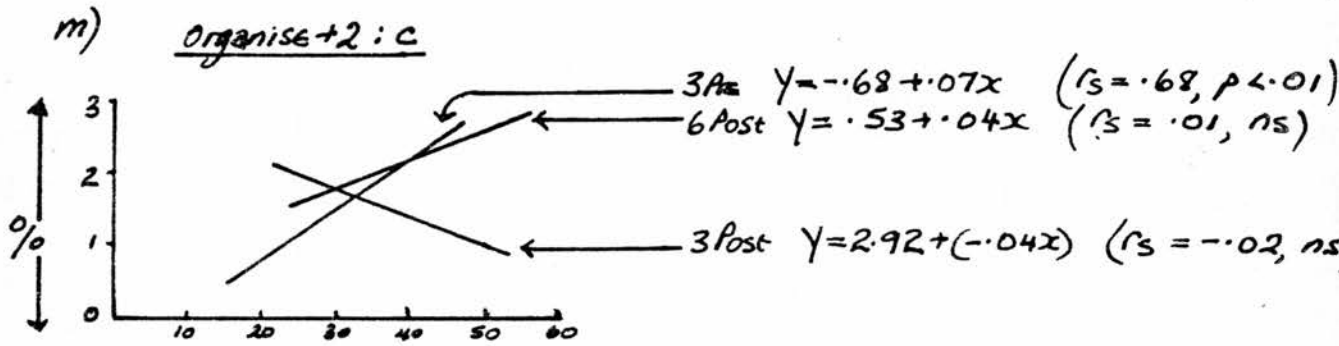
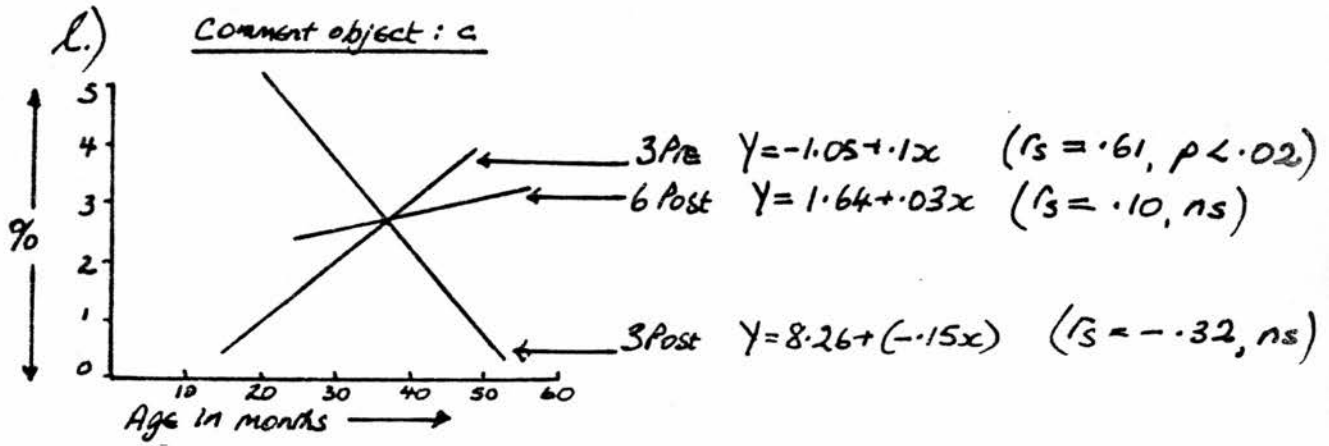
c = child behavior



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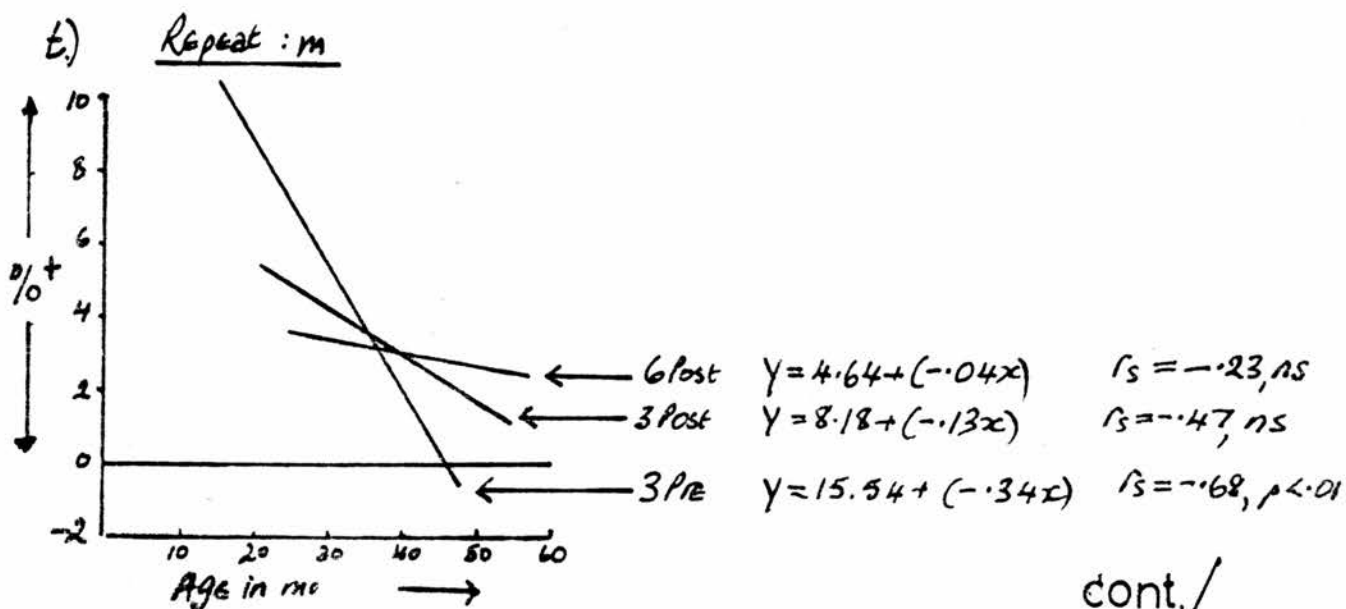
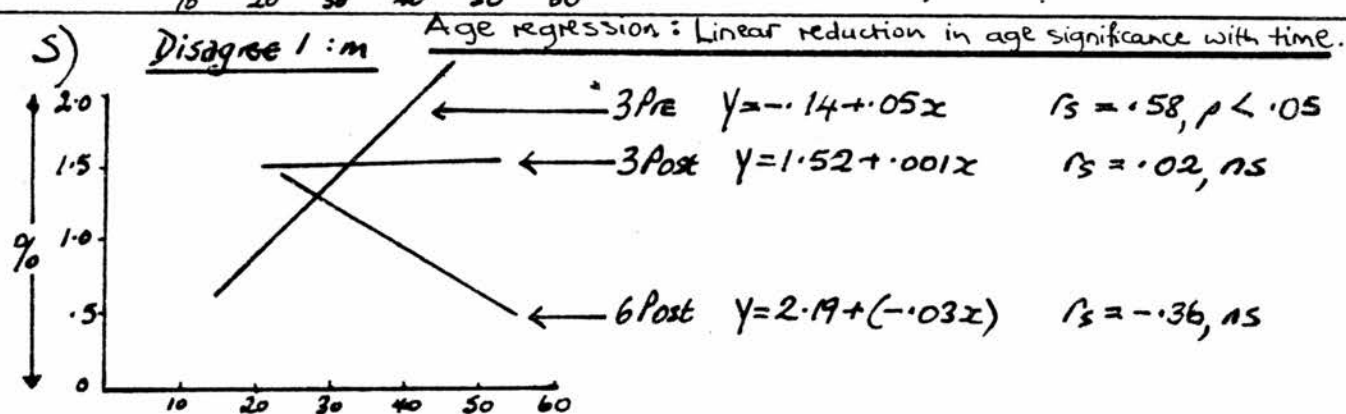
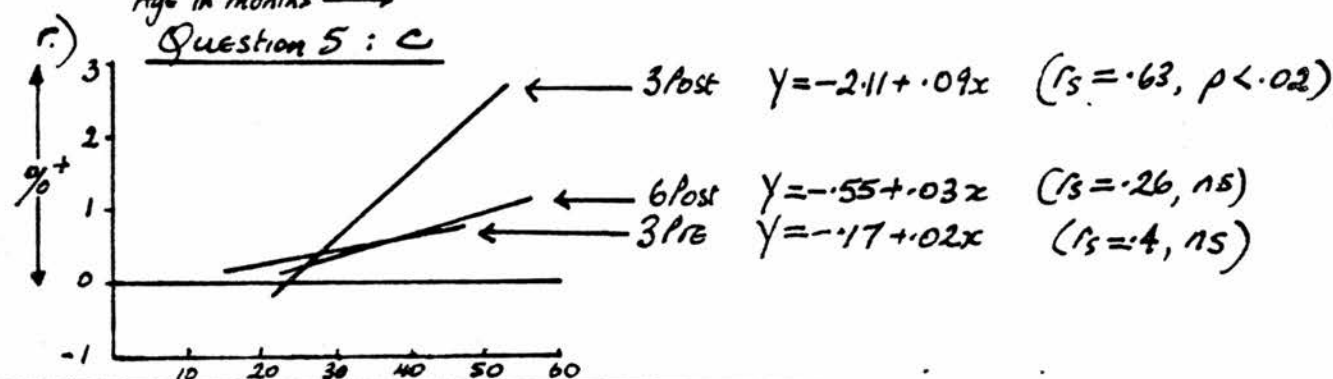
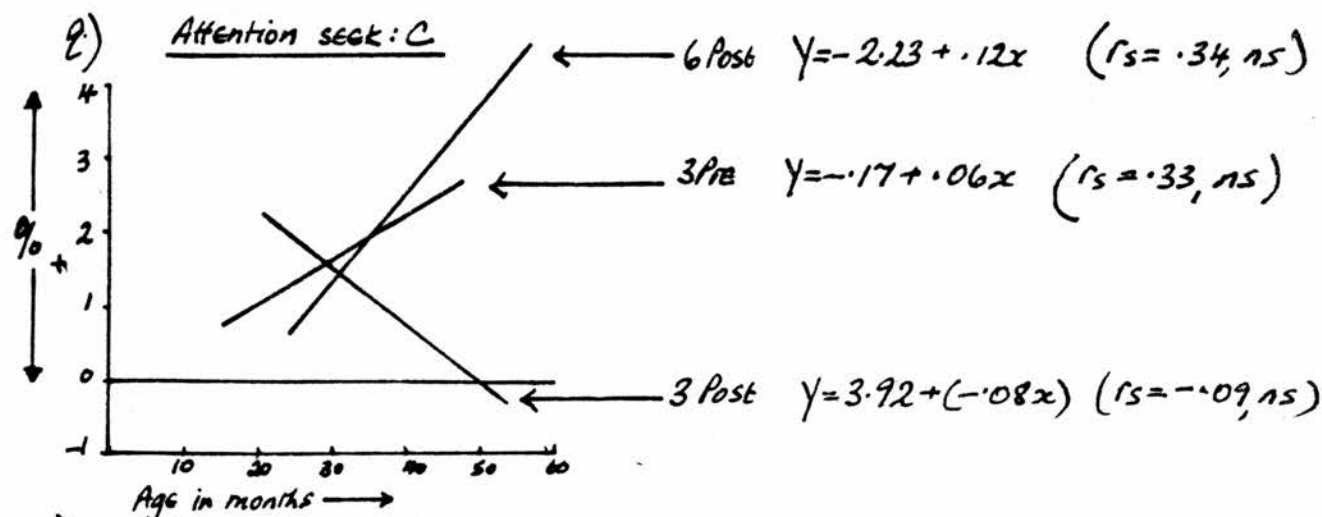
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(c = child behavior)



cont./

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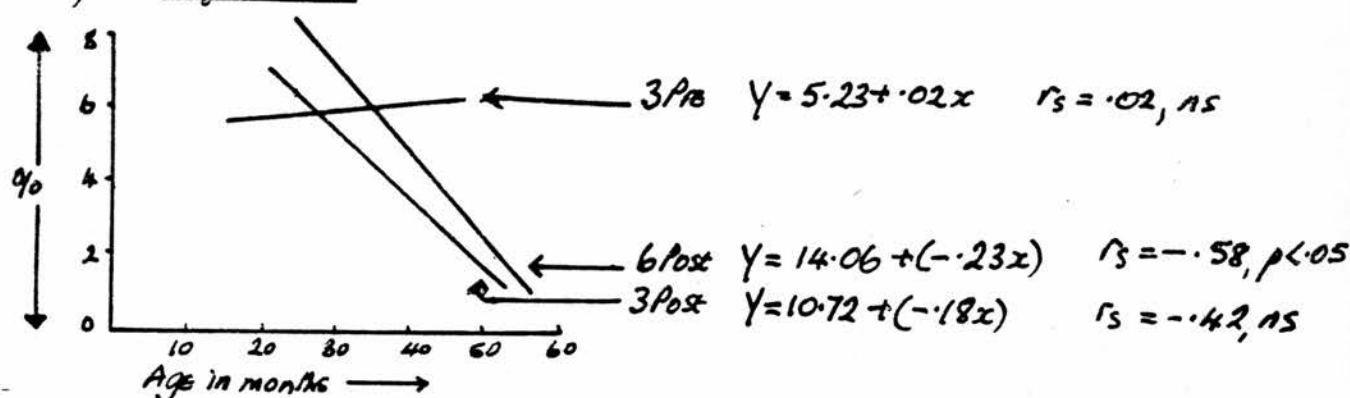
(C = child behavior
M = mother behavior)

cont./

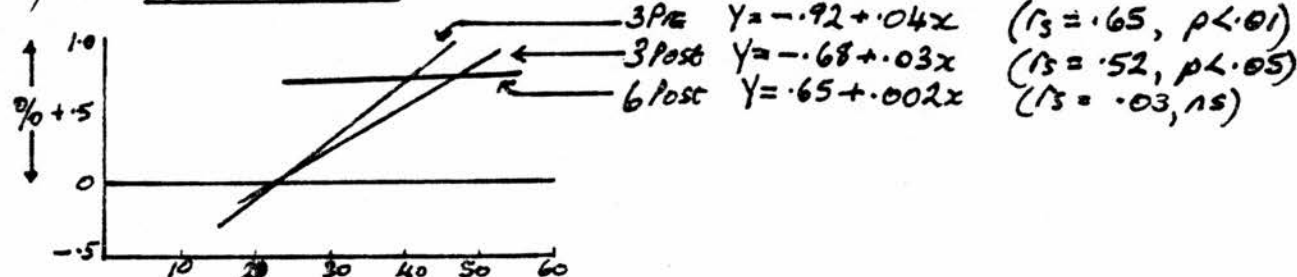
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(m = mother behavior
c = child behavior)

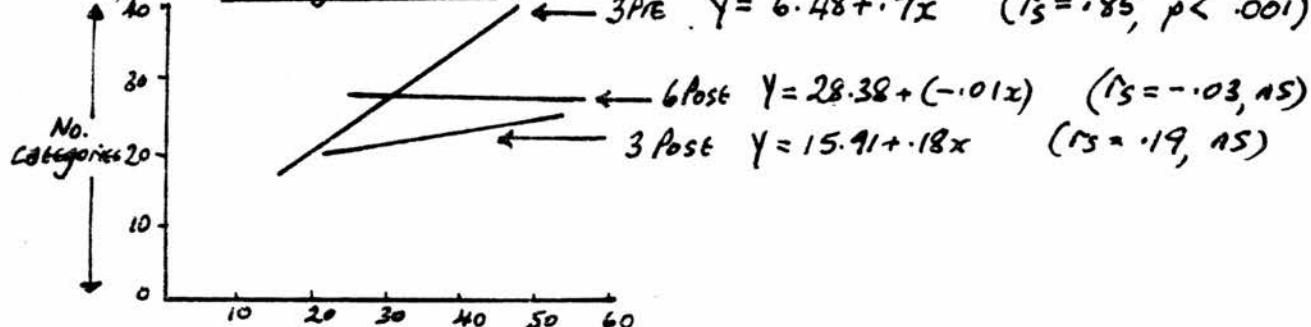
U) Request 3: m



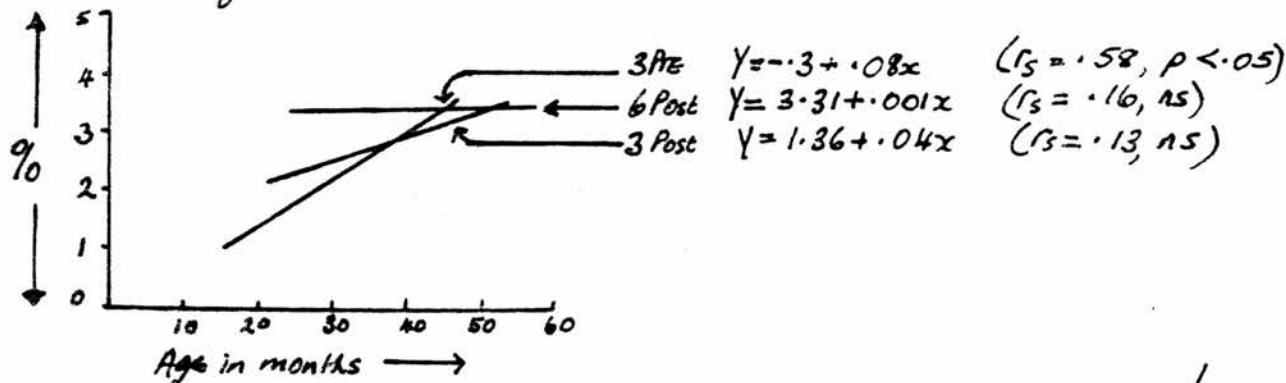
V) Question 2: c



W) No categories used: c



X) Agree 1: c

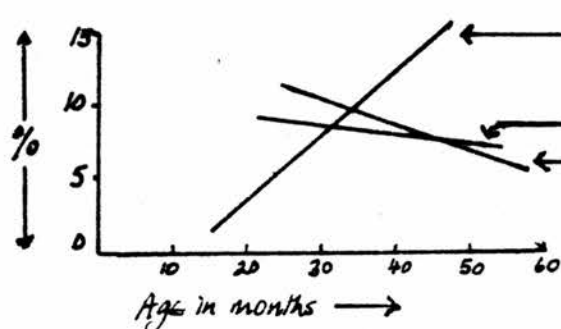


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y.) Information 1: C

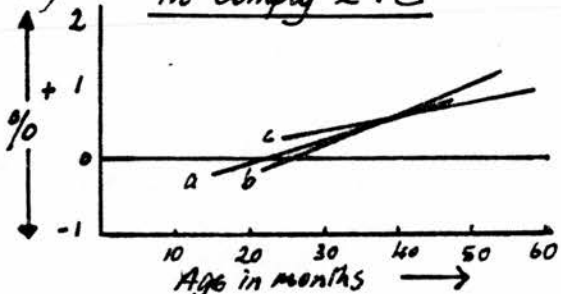
(C = child behavior)



$$Y = -5.27 + .44x \quad (r_s = .75, p < .001)$$

$$Y = 10.57 + (-.07x) \quad (r_s = -.23, ns)$$

$$Y = 15.1 + (-.17x) \quad (r_s = -.07, ns)$$

z.) No Comply 2: C

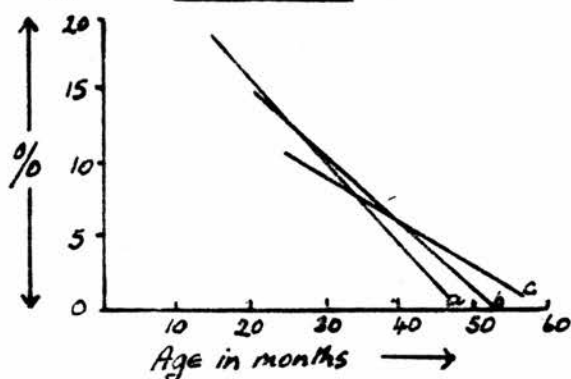
$$\begin{aligned} \text{a) } 3\text{Pre} & \quad Y = -.63 + .03x \quad (r_s = .66, p < .01) \\ \text{b) } 3\text{Post} & \quad Y = -.96 + .04x \quad (r_s = .49, ns) * \\ \text{c) } 6\text{Post} & \quad Y = -.16 + .02x \quad (r_s = .37, ns) \end{aligned}$$

* = nearly significant

FIG Age regression: 'Solid trend'

i) Repeat: C

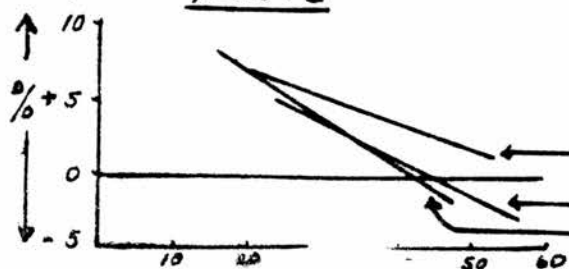
(C = child behavior)



$$\text{a) } 3\text{Pre} \quad Y = 26.52 + (-.54x) \quad (r_s = -.78, p < .001)$$

$$\text{b) } 3\text{Post} \quad Y = 23.44 + (-.44x) \quad (r_s = -.65, p < .01)$$

$$\text{c) } 6\text{Post} \quad Y = 18.61 + (-.36x) \quad (r_s = -.66, p < .01)$$

ii) Name: C

$$\text{3Post} \quad Y = 10.43 + (-.17x) \quad (r_s = -.35, ns)$$

$$\text{6Post} \quad Y = 9.37 + (-.19x) \quad (r_s = -.65, p < .01)$$

$$\text{3Pre} \quad Y = 13.24 + (-.31x) \quad (r_s = -.52, p < .05)$$

3. Qualitative Comparisons of Categories

Frequencies of categories that differed only qualitatively were compared for mothers and children separately, at each of the three time periods. It was intended to see if mothers and children consistently functioned at one of two levels within a category (e.g. Comply 1 rather than Comply 2), and at one extreme of two opposing categories (e.g. Comment self 2 rather than Comment other 2). Secondly, these comparisons were thought would highlight individual styles in mother-child interaction. The results pertaining to the mothers will be presented first, then the children's.

Mothers

Table 7.3a presents the results of 15 sets of qualitative comparisons between categories. As can be seen, 4 styles were consistently significant across all three periods. These were for mothers to comment on their children's actions more than on their own (Comment other 2 > Comment self 2); to get their children to do something by asking in the nicest possible way, rather to stop them again in a nice way (Organise +1 > -1); to comply immediately rather than with delay (Comply 1 > 2); and to criticise their children's actions mildly rather than severely (Judgement -1 > -2). In these behaviours then, the mothers as a group were consistent, irrespective of the birth.

Another 4 styles were consistently significant at 3 months Pre and at 6 months Post, and although similar trends were maintained at 3 months Post, they were then not significant. These were for mothers to persuade their children to engage in an activity rather than to command (Organise +1 > +2), and to order them to do something rather than deter them from doing something (Organise +2 > -2). Mothers also complied more often than they did not comply (Comply 1 > No Comply 1),

and they gave reasons for not complying rather than simply refusing to comply (No Comply $2 > 1$). Although as has been mentioned the same trends were maintained at 3 months Post, the fact that they were not significant implies that a change in balance took place. This change tended to be towards a decrease in 'positive' behaviours, and an increase in firm control and 'negative' behaviours at 3 Post. By 6 months Post however, the original balance that was obtained at 3 months Pre had been 'restored'.

Of the remaining 7 sets of comparisons, 5 showed a significant pattern at one or two of the visits, and the other 2 yielded no significant patterns at any of the visits. Notable among the 5 is one pattern in which a reversal occurred at 3 Post, but more importantly the tendency was as in the four patterns just mentioned above, towards firmer control at 3 Post. Thus mothers tended to strongly prohibit their children's actions rather than mildly dissuade (e.g. "Don't. . ." rather than "Would you mind not . . .") (Organise $-2 > -1$) at 3 Post, whereas at 3 Pre and 6 Post the reverse was true though significant only at 3 Pre.

Generally then, not only did mothers engage least in positive behaviours at 3 Post compared to 3 Pre and 6 Post, but age trends (approximate individual difference trends) were generally disrupted, and there was also a tendency for negative behaviours to increase at the same period.

Children

The results of qualitative comparisons of categories used by the children are presented in Table 7.3b. As for the mothers,

some comparisons were consistently significant across all three visits, others only on some, and for two on none of the visits.

The two that were consistently significant were that children talked about their own activities more than about their mothers' (Comment self 2 > Comment other 2), and they complied more often than they did not comply (Comply 1 > No Comply 1). These two patterns then, can be said to have been independent of the birth of the sibling, and to have been characteristic of the children's behaviour. That the children complied more than they did not comply is unexpected. Intuitively one would expect the reverse, particularly in the context of the effect of the birth.

Unlike the results for the mothers, there was little disruption in patterns at 3 months Post. This is consistent with the earlier finding that children's behaviour did not differ much at 3 Post compared to 3 Pre and 6 Post; but is inconsistent with the marked disruptions in age relations that occurred at 3 Post.

One of the two patterns that was disrupted at 3 Post was the comparison between No Comply 1 and No Comply 2. At 3 Pre and 6 Post, children simply refused to comply more often than they gave reasons for not complying (No Comply 1 > 2). At 3 Post, this trend was maintained, but it was not significant. The second pattern that was disrupted at 3 Post was not significant at any of the three periods, but more interestingly showed a reversal. Thus at 3 Pre and 6 Post there was a tendency for the children to Smile and laugh more than to

Table 7.3a

Qualitative Comparisons of Categories: Mother

Categories	3 months Pre-birth	3 months Post-birth	6 months Post-birth
Com. Self 2 vs. Com Other 2			
Organise +1 vs. -1	CO2 > CS2 p = .004	CO2 > CS2 p = .022	CO2 > CS2 p = .036
Comply 1 vs. Comply 2	Org+1 > Org-1 p < .002	Org+1 > Org-1 p = .008	Org+1 > Org-1 p < .004
Judgement -1 vs. -2	Cl1 > Cl2 p = .008	Cl1 > Cl2 p = .006	Cl1 > Cl2 p = .036
Organise +1 vs. +2	J-1 > J-2 p < .008	J-1 > J-2 p = .006	J-1 > J-2 p < .002
Organise +2 vs. -2	Org+1 > Org +2 p = .004	Org+1 > Org+2 ns.	Org+1 > Org+2 p = .036
Comply 1 vs. No Comply 1	Org+2 > Org -2 p < .002	Org+2 > Org-2 ns.	Org+2 > Org-2 p = .004
No Comply 1 vs. No Comply 2	Cl1 > NoCl1 p < .002	Cl1 > No Cl1 ns.	Cl1 > NoCl1 p < .002
Judgement +1 vs. +2	NoCl2 > NoCl1 p = .006	NoCl2 > NoCl1 ns.	NoCl2 > NoCl1 p = .006
Agree 1 vs. Agree 2	J +1 > J +2 p = .002	J+1 > J +2 p = .038	J+1 > J+2 ns.
Organise -1 vs. -2	A2 > A1 p = .012	A2 > A1 ns.	A1 > A2 ns.
Comply 2 vs. No Comply 2	Org-1 > Org-2 p = .036	Org-2 > Org-1 ns.	Org-1 > Org-2 ns.
Judgement +2 vs. -2	NoCl2 > Cl2 ns.	NoCl2 > Cl2 ns.	NoCl2 > Cl2 p = .022
Question 3 vs. Information 2	J+2 > J-2 ns.	J+2 > J-2 ns.	J+2 > J-2 p = .022
Judgement +1 vs. -1	Q3 > Info 2 ns.	Q3 > Info 2 ns.	Info2 > Q3 ns.
	J-1 > J+1 ns.	J-1 > J+1 ns.	J+1 > J-1 ns.

Table 7.3b

Qualitative Comparisons of Categories: Child

Categories	3 months Pre-birth	3 months Post-birth	6 months Post-birth
Com. Self 2 vs. Com. Other 2			
Comply 1 vs. No Comply 1	CS2 > CO2 p < .002	CS2 > CO2 p < .004	CS2 > CO2 p < .004
No Comply 1 vs. No Comply 2	Cl1 > NoCl1 p < .002	Cl1 > NoCl1 p = .002	Cl1 > NoCl1 p < .004
Request 1 vs. Request 2	NoCl1 > NoCl2 p = .022	NoCl1 > NoCl2 ns.	NoCl1 > NoCl2 p = .012
Play (Objects) vs. Joint activity	Rq2 > Rq1 p < .006	Rq2 > Rq1 p = .004	Rq2 > Rq1 ns.
Agree 1 vs. Agree 2	Play > JA p = .012	Play > JA p = .008	Play > JA ns.
Organise +1 vs. +2	A1 > A2 ns.	A1 > A2 p = .038	A1 > A2 p = .002
Smile vs. Cryfuss	Org +1 > Org +2 ns.	Org +1 > Org +2 ns.	Org +1 > Org +2 ns.
	Smile > Cryfuss ns.	Cryfuss > Smile ns.	Smile > Cryfuss ns.

N.B. Cryfuss = Cries + fuss

'cry fuss' (cry fuss = cries + fuss). At 3 Post however, they tended to 'cry fuss' more than to smile.

4. Individual differences

Almost without exception, every single mother-child pair exhibited some behaviour which was different from that of every other pair, if only in terms of frequencies. In this way it could be said that each pair was unique and therefore each manifested individuality. Attempts to group the mother-child pairs were discarded for two reasons. Firstly, while the individuals in a group may have showed a behaviour in common, they often differed in a number of other respects. Secondly, classifying e.g. two mothers in the same group, on the basis that they criticised their children more than they approved of their actions, appeared to defeat the idea of having distinguished levels within a category in the first place, especially if one mother was mildly critical (Judgement -1) and the other more condemning (Judgement -2). Therefore instead of groups individual profiles of some mother-child pairs will be presented. This has the further advantage of painting a more complete picture, especially in the case of children whose behaviour is exceptionally different in the other studies done in this thesis.

The selection of individuals was based mostly on mother behaviours, although in each case unusual behaviours exhibited by children were also included. Mothers were singled out on the basis of two behavioural styles, and any other behaviours especially if they differed from those shown by other mothers.

These two styles were:

- a) mothers who criticised their children's actions (Judgement -) more than they praised and encouraged (i.e. Judgement +).
- b) mothers who engaged in 'negative control' through stopping a child's activities (Organise -) more than they showed 'positive control' (Organise +) through for example, suggesting activities for the child. These two styles were chosen partly because they involved behaviours that were commonly and frequently used by all mothers, but more importantly because they were thought to indicate (amongst other behaviours) the quality of the mother-child relationship, and hence highlight individual differences. One hardly needs scientific evidence to believe that a child whose actions are frequently restricted and disapproved of more than they are positively guided and encouraged must be in a 'less healthy' relationship than the child whose experience is the opposite.

However, with three visits rather than one or two, it was thought that to include every mother who showed either of the styles at each of the visits, particularly if this was only at one category level (e.g. $J-1 > +1$ only) would defeat the whole purpose of this section. The result would be a complex mazy picture in which hardly any individuals could be differentiated. Therefore selection was based on mothers who were consistent in one style at both levels (e.g. Judgement $-1 > +1$ and Judgement $-2 > +2$), or both styles on one or more visits. In addition, any other 'unusual' behaviours were also included. One of these behaviours which was shown by a minority of mothers at 'feed' and 'sleep' (Chapter 8) was not so unusual here, as

it was shown by about half of the mothers in the two post-birth visits combined. This was the tendency to comment more on the baby's actions than on the first child's. Such behaviour is thought to arouse jealousy and resentment in the older child (see p.245). (For the sake of uniformity, the children's ages given after their names are their ages at 6 months Post-birth).

C. The first three individuals to be presented all share in common the fact that at 3 months Post-birth their mothers commented on the baby's actions more than on the children's.

1. Peter (2 yrs. $7\frac{3}{4}$ months)

2. Simon (2 yrs. $0\frac{1}{4}$ months)

In addition to C above, Simon's mother also mildly criticised more than she praised Simon's actions (Judgement -1 > +1), at 3 Pre, 3 and 6 Post.

3. Caroline (3 yrs. 9 months)

At 3 months Pre, Caroline was criticised both mildly and severely more than she was praised. (Judgement -1 > +1; Judgement -2 > +2). Apart from C above, her mother stopped her actions, both mildly and imperatively more often than she got her to do something (Organise -1 > +1; Organise -2 > +2) at 3 Post.

D. The next six children also share one behaviour in common. At 6 months Post-birth, their mothers talked more often about the baby's actions than about the child's.

4. Morag (2 yrs. $8\frac{3}{4}$ months)

5. Timothy (2 yrs. $9\frac{3}{4}$ months)

6. Louisa (3 yrs. $1\frac{1}{2}$ months)

7. Marian (2 yrs. $2\frac{3}{4}$ months)

At 3 months Pre, 3 and 6 months Post, Marian's mother tended to criticise more than praise her child, though mildly (Judgement -1 > +1). Apart from D above, this mother also talked about her own actions in relation to the baby more than just her own actions at 3 Post and 6 Post.

8. Jane (2 yrs. $10\frac{3}{4}$ months)

At 3 months Pre, Jane's mother tended to criticise both mildly and severely more than she praised Jane's actions. (Judgement -1 > +1; Judgement -2 > +2). At 3 and 6 months Post she ordered Jane to do something more often than she asked nicely (Organise +2 > +1).

9. Thomas (4 yrs. 8 months)

Thomas is the last of this group of six whose mothers commented more on the baby's actions than the child's at 6 months Post. However, at 3 months Pre, his mother had also tended to criticise rather than praise, at both levels (Judgement -1 > +1; Judgement -2 > +2).

E. Although the next child to be presented could have been grouped with the last six, his mother's style (in relation to the baby) was different from that of the last six.

10. Jimmy (2 yrs. $1\frac{3}{4}$ months)

At 3 months Pre, Jimmy's actions were strongly disapproved of rather than mildly (Judgement -2 > -1) and more than they were approved of (Judgement -2 > +2). Then at 3 and

6 months Post, his mother asked more questions to do with the baby's state (Question 1) rather than his own state. Also at 6 months Post, Jimmy's mother still tended to criticise rather than praise, at both levels (Judgement -1 > +1; Judgement -2 > +2).

F. The last two children to be presented differ from all the ones already mentioned, in that neither at 3 months Post nor at 6 Post did their mothers refer to the baby more than to them. Instead their mothers engaged more in negative control and/or criticism than in positive control and encouragement.

11. Martin (4 yrs. 0 $\frac{1}{4}$ months)

Martin was controlled negatively more than positively, and severely rather than mildly at 6 months Post (Organise -1 > +1; Organise -2 > +2; Organise -2 > -1). Indeed Organise -2 had the highest rank of all his mother's behaviours, followed by Organise -1. Part of this control was due to him being 'naughty' e.g. climbing onto the table; but part was due to his molesting and harassing the baby, e.g. kicking her chair when she was sitting in it or throwing bits of crumpled paper at her, at 6 months Post.

12. Philip (4 yrs. 2 $\frac{3}{4}$ months)

At 3 months Post, Philip's actions were prohibited more or as equally as they were positively guided (Organise -1 \leq +1; Organise -2 > +2). He was also criticised both mildly and severely more than he was praised (Judgement -1 > +1; Judgement -2 > +2), and severely criticised more than mildly (Judgement -2 > -1).

He was no longer in the sample at 6 months Post (his family having emigrated), but there is no reason to believe the pattern would have been very different at 6 months Post.

DISCUSSION

Results based on home observations of mothers and children from 3 months before to 3 and 6 months after the birth of the sibling, showed surprisingly few quantitative differences in their behaviour. Even more striking is the fact that, of the few behaviours that did change, hardly any could be most easily explained in terms of the birth of the sibling. There was a tendency for mothers to engage in positive behaviours at 3 Pre and 6 Post more than at 3 Post-birth. However, in no comparison between any of the three time periods, even at 3 Post which seemed to be a difficult time did control measures (Organise) for example and negative behaviours in general feature significantly.

The children's behaviour was not significantly different on any measure between 3 months Pre and 3 months Post-birth, and was different on only one measure between 3 Post and 6 Post.

Repetition of utterances which occurred significantly more at 3 Pre compared to 6 Post was due to age, and although none of the other three measures that occurred more at 6 Post than at 3 Pre were significantly due to age, they do not appear to have been obviously due to the birth either. They were Comment other2, Request 1 and Comment self 2. Finally and interestingly, no mother or child behaviour occurred significantly

more at 3 months Post-birth, in comparison with either of the other two periods.

In general then, the results obtained here are not similar to those found by Dunn and Kendrick (1980a), the only study with which this one can be compared. Amongst other findings, they reported decreases in several measures reflecting maternal attention, e.g. showing and helping; decreases in suggestions for children to engage in, for example a new activity; increases in maternal prohibitions and time in confrontations; increases in control episodes in conversation, and in verbal interactions started by the child; after the birth compared to before. Perhaps this disparity in our results is due mainly to the post-birth periods covered in our studies. Theirs was 2 to 3 weeks after the birth, and mine covered the period up to 6 months after the birth. The pre-birth periods were more comparable, theirs being 1 to 3 months before the birth, and mine being 3 months before. Hence they may have covered a post-birth period during which most of the changes occurred. However, for 2 reasons, the post-birth period they covered is thought not to be the crucial difference:

1. Comparisons of a few results based on interviews, and which were conducted about two weeks after the birth in both our studies, showed that their children appeared to have been more disturbed by the birth than those studied here (p. 68).
2. The results reported in this chapter on Correlations with age and Qualitative comparisons of categories indicate that at 3 months Post-birth there was still some considerable disturbance. Now it is difficult to say whether the few significant

differences reported here would have been obtained at 2 to 3 weeks Post-birth, but the fact that there was still an element of turmoil in mother-first child relationships at 3 months Post-birth, means that most change did not occur at 2 to 3 weeks Post. The socio-economic differences in our sample compositions may have yet again given rise to our different results.

However, socio-economic differences apart, one area in which our results are in some agreement is that of associations. Dunn and Kendrick (1980a) found that child behaviours and those of mothers and children that were associated before the birth, ceased to be associated after the birth. Measures of association between behaviours were not done here, but a large number of correlations between age and behaviours which had also been associated before the birth were found not to be after the birth. This was so of mother behaviours in relation to the children's ages, as well as age-related children's behaviours. Further, most of the disruptions occurred at 3 months Post.

As was earlier mentioned, some patterns that were obtained from qualitative comparisons of categories were also disrupted. This was more so for mother behaviours than child behaviours. In most cases however the direction of the trend was maintained, but it was not significant. This disruption too occurred, in a number of cases at 3 months Post.

In conclusion therefore, the behaviour of the mothers and children studied here showed few changes (in a quantitative sense) from before to after the birth of the sibling. However, those which did show changes were in the direction of the

reduction of positive behaviours. Also, in terms of qualitative changes, it was also evident that mothers tended to show more negatively controlling and judgemental behaviours than positive ones at 3 months post-birth. Finally, many other behaviours showed disruption in the previously obtained (i.e. at 3 months Pre) age trends, either positive or negative. Thus the effect at 3 months Post seems to take the form of a general disruption with a reduction in more positive behaviours. Certainly the measures that one would have expected to show some change e.g. 'maternal control' and 'child demanding' were not obtained here. However, the birth is thought to have had considerable effect, in terms of the age-correlations that were disturbed, and on the quality of interaction.

(The information on individual differences is of great interest. However, it will be integrated with that from the other studies on the same individuals and presented in Chapter 9.)

B. Structured game - Skittles

INTRODUCTION

Skittles is a game in which the players try to knock down a set of nine 'wooden pins' with a ball. The aim of including this game was to create a situation in which it was necessary for the mother to control her child. The forms of control that were particularly of interest were:

- (i) Verbal: e.g. "Don't throw the ball, roll it". (See Organise in Classification and Description of utterances for definition.)

- (ii) Physical: e.g. Manipulating the child's actions, dragging the child to the starting line etc. (See Classification and Description of Acts for definitions and other forms of physical control.)

The game was played twice by each mother-child pair, namely at 3 months Pre and at 6 months Post sibling birth. Both times the game was played immediately after the unstructured observation was completed.

It was of interest to see whether there were changes in the mothers' controlling behaviour specifically, and in mother-child 'game interaction' in general, from before to after the birth of the sibling.

METHOD

Subjects:

As in Unstructured observations (see page 198). The game of skittles was played in the home, and as has been mentioned at the end of the unstructured observation. The first time the mother and child were to play the game, the investigator introduced the topic to the mother along these lines:

"I brought along a game. It's called skittles. I don't know whether (name of child) has played it before, but I would like to ask if you could maybe show him how to play it, and maybe play with him."

The investigator then set up the skittles on the floor, put down a piece of string (about 2 feet long) which she pointed out was the starting line, and placed a ball next to the string.

The mother then took off from there and showed her child how to play the game.

The second time the mothers and children were to play the game, it was obviously inappropriate to introduce the game exactly as before. Thus, the investigator simply informed the mother that she had brought skittles again, and set the game up. All the mothers immediately took charge and either asked their children whether they remembered how to play the game, showed them how to, or simply encouraged them to play.

The game lasted about 10-15 minutes, depending on the child's interest. Children of about 2 years of age and older, who could play the game better than the younger ones and clearly enjoyed it, almost always wanted to continue playing after the time was up.

Note: On both occasions when the game was played it was deliberately not specified whether the mother should only show her child how to play the game, or continue to play with him. The choice was left entirely to the mother.

Recording and Scoring:

All the verbal interchanges between mother and child while the game was in progress were recorded on a portable tape-recorder. Unlike the unstructured observations, where a continuous record of all mother and child behaviours was kept, attention was paid only to a selected number of categories. These were Smile (for both mothers and children separately) and Physical control (only applicable to mothers). Frequencies of Smile and Physical Control were later worked out, and expressed as a percentage relative to the individual's total verbal and

non-verbal behaviours. The Physical Control score was a combined score of all the separate behaviours classified under this category, since none of the behaviours separately occurred with enough frequency to merit separate analysis. The verbal interactions were transcribed verbatim from the tapes, and the utterances classified according to the system in Classification and Description of Utterances. A frequency count of each category used by mother and child separately was made, and then converted into a percentage relative to the individual's total verbal and non-verbal behaviours.

RESULTS

The following questions are asked:

1. Are there differences in the frequencies of mother and child behaviours separately, when the two sessions in which skittles was played are compared?
2. Are the differences obtained in (1) above related to age?
3. When frequencies of two levels of the same category (e.g. Organise +1 and Organise +2) or two categories that are diametrically opposed (e.g. Judgement +2 and Judgement -2) are compared, do mothers and children separately consistently function at one of the two levels and at one of the two extremes in the two sessions?

1. Mother behaviours

Overall, mothers' behaviour was not significantly different in the two game sessions. There was only one significant result (see Table 7.4a), and the rest of the measures

on which no differences were found are listed in Appendix 5c. The significant finding that mothers repeated their utterances more in the game session before the birth than after, is very similar to the result obtained in the Unstructured observation. Repetition at 3 months Pre was greater than at 6 months Post, and nearly significant ($p = .058$).

Child behaviours

Unlike the mother behaviours, a few more of the children's were significantly different in the two sessions. Measures on which no significant differences were found are listed in Appendix 5c. Those that were significant (see Table 7.4b) were that the children used a greater number of categories, commented on their play (comment self 2) as well as their mothers' (comment other 2) and asked questions requiring factual information (Question 4), more in the session after the birth than before. It is possible that all four findings can be explained in terms of the 9 months differential in the children's ages, but whether this is so will be examined in the next section.

2. Correlations with age

Mothers' and children's behaviours that were significantly correlated with the children's ages at either or both sessions are presented in Tables 7.5a and 7.5b respectively. Measures on which no significant correlations were obtained are listed in Appendix 5c.

The results in Tables 7.5a and 7.5b generally confirm some of the age-related findings obtained in the Unstructured

Table 7.4a Skittles: Quantitative Comparisons of Categories: Mothers

<u>Repeat</u>	3 Pre > 6 Post	p = .022
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Table 7.4b Children

No. categories used	3 Pre < 6 Post	p = .036
Comment Self 2	3 Pre < 6 Post	p = .008
Comment Other 2	3 Pre < 6 Post	p = .022
Question 4	3 Pre < 6 Post	p = .012

Table 7.5a Correlations between Children's age and Mother's Scores at 3 Pre and 6 Post

	<u>3 Pre</u>	<u>6 Post</u>
Comment Other 2	.5 *	.46 ns.
Question 3	.76 ****	.42 ns.
Repeat	-.53 **	-.44 ns.
Information 1	.34 ns.	.56 **
Organise +2	-.17 ns.	-.67 ****
Judgement -1	.35 ns.	.52 *
Claim 2	.32 ns.	.63 ***

Table 7.5b Correlations between Children's age and Children's Scores at 3 Pre and 6 Post

	<u>3 Pre</u>	<u>6 Post</u>
No. Categories used	.61 ***	.67 ****
Claim 2	.54 **	.55 **
Exclamation	-.56 **	.16 ns.
Comment self 2	.52 *	.19 ns.
Agree 1	.71 ****	.25 ns.
Question 4	.60 **	.47 ns.
Information 1	.64 ***	.27 ns.
Repeat	-.56 **	-.33 ns.
Organise +1	.68 ****	.31 ns.
No Comply 1	.60 ***	.09 ns.
Claim 1	.53 **	.36 ns.
Comply 1	.43 ns.	-.5 *
Smile	.25 ns.	.60 **

* Almost significant, critical value for p = .05 is .5264 (2 tailed)

** p ≤ .05

*** p ≤ .02

**** p ≤ .01

Note: N = 16 for both 3 Pre and 6 Post

observations for the same periods. Further, as in the unstructured observations, quite a number of measures are related to age in one session and not in the other, and for the child behaviours in particular most of the significant correlations are also in the pre-birth session.

In relation to differences obtained between the two game sessions in (1), that mothers repeated their utterances more in the before than after birth session, was more marked in interaction with the younger children.

The children's use of a greater number of categories at 6 Post compared to 3 Pre was significantly and positively related to age. Commenting on the mother's play (Comment other 2) and asking questions (Question 4) which also occurred significantly more at 6 Post than at 3 Pre, were more marked in the older children, but not significantly. The last of the significant differences between the two sessions, that of the children commenting on their own actions in the game (Comment self 2), more at 6 Post than at 3 Pre was not related to age, although at 3 Pre the correlation was positive and almost significant, thus suggesting that the main period in which age-change occurred had passed by the second session.

3. Qualitative Comparisons of categories

Without exception, the significant patterns that were obtained for both mothers and children (see Tables 7.6a and 7.6b) are identical to those obtained at 3 Pre and 6 Post of the Unstructured observations. Moreover, quite a number of the non-significant ones obtained here, are the same as those in

the Unstructured observation, and when they do differ it is more in terms of significance level than the direction of the trend.

Thus of the significant patterns, mothers commented more on their children's actions than on their own (Comment other 2 > Comment self 2), directed positively more than negatively (Organise +1 > -1; Organise +2 > -2) and criticised mildly rather than severely (Judgement -1 > -2), in the two game sessions.

Children commented more on their own actions than on their mother's (Comment self 2 > Comment other 2), and complied more often than they did not Comply (Comply 1 > No Comply 1), also in both sessions.

DISCUSSION

There was little difference in the quantitative comparisons of the 3 Pre and 6 Post data on Unstructured observations. The same was found here between comparisons of the two game sessions that were also conducted at 3 Pre and at 6 Post. The very few mother and child behaviours that were significantly different in the two game sessions, could mostly be explained in terms of age. However, as was also found for the Unstructured observations, a number of other behaviours that were significantly correlated with age in the session before the birth (3 Pre), were not correlated after the birth (6 Post). This was especially marked in child behaviours.

Qualitative comparisons between categories in the two game sessions, also yielded patterns that were similar to those found in the Unstructured observation, for the same periods.

Table 7.6a Skittles - Qualitative Comparisons of Categories:
Mother

	<u>3 Pre</u>	<u>6 Post</u>
<u>Com. self 2 vs. Com other 2</u>	C02 > CS2 p=.036	C02 > CS2 p=.022
<u>Organise +1 vs. -1</u>	Org +1 > Org -1 p< .004	Org +1 > Org -1 p< .004
<u>Organise +2 vs. -2</u>	Org +2 > Org -2 p< .004	Org +2 > Org -2 p< .004
<u>Judgement -1 vs. -2</u>	J-1 > J-2 p=.008	J-1 > J-2 p<.008
<u>Judgement +1 vs. +2</u>	J+1 > J+2 p<.006	J+1 > J+2 ns.
<u>Agree 1 vs. Agree 2</u>	A2 > A1 ns.	A2 > A1 ns.
<u>Question 3 vs. Info 2</u>	Q3 > Info 2 ns.	Q3 > Info 2 ns.
<u>Organise +1 vs. +2</u>	Org +2 > Org +1 ns.	Org+1 > Org+2 ns.
<u>Organise -1 vs. -2</u>	Org-1 > Org -2 ns.	Org-1 > Org-2 ns.
<u>Judgement +1 vs. -1</u>	J -1 > J +1 ns.	J -1 \nless J +1 ns.
<u>Judgement +2 vs. -2</u>	J -2 > J +2 ns.	J +2 > J -2 ns.
<u>Claim 1 vs. 2</u>	Claim 1 > Claim 2 ns	Claim 1 \nless Claim 2 ns

Table 7.6b Qualitative Comparisons of Categories: Child

	<u>3 Pre</u>	<u>6 Post</u>
<u>Com self 2 vs. Com other 2</u>	CS2 > C02 p<.006	CS2 > C02 p<.008
<u>Comply 1 vs. No Comply 1</u>	C11 > NoC11 p<.008	C11 > NoC11 p<.004
<u>Agree 1 vs. Agree 2</u>	A1 > A2 ns.	A1 > A2 ns.
<u>Organise +1 vs. +2</u>	Org +2 \nless Org +1 ns	Org+1 > Org+2 ns
<u>Claim 1 vs. 2</u>	Claim 1 > Claim 2 ns	Claim1 > Claim2 ns

Therefore, overall, the structured observations produced similar results to the Unstructured ones.

The main aspects that were of interest in the game situation, those of maternal verbal and physical control were not significantly different in the two sessions.

Plan: Classification and Description of Acts

Cries	<u>Attention-getting</u>
Fuss	Tap
Play	Lead
Event 1	
Event 2	<u>Physical Control</u>
Joint activity	Manipulate
	Taking over
<u>Establish/Maintaining Contact</u>	Drag off
Approach	Placement
Follow	Strike
Look	
Smile	<u>Distance</u>
Elicit pick up	Close
Watch	Near
	Far
<u>Contact</u>	Out of sight
Touch	
Hold	
Cling	
Affectionate Contact	
<u>Breaking Contact</u>	
Look away	
Leave	
Put down	

Note: Order in which definitions are presented is from top to bottom of columns, and left to right.

<u>Code</u>	<u>Classification and Description of Acts</u>
	M = Mother C = Child
cries	<u>Cries</u> - Intense continuous 'negative' vocalisation, usually loud and tearful. Includes low roaring vocalisation ('waaaaah'), and high pitched screams. Distinguished from <u>Fuss</u> .
fuss	<u>Fuss</u> - Less intense and of shorter duration than <u>Cries</u> . Includes protesting, whining, stamping, kicking, hitting-at (but not at M - see <u>Strike</u>).
play ()	<u>Play</u> () - C manipulates, bounces, bangs toy object (what). Behaviour is considered continuous as long as child has object. Includes C 'reading', painting, drawing and watching TV. Mouthing of toy object is not included; but dancing and jumping are. Play with or without objects, in the context of 'make-believe' (fantasy) is classified under <u>Play Categories</u> (<u>See Classification and Description of Utterances</u>)
event 1	<u>Event 1</u> Includes: M or C coughing, sneezing, burping, falling, yawning, throwing an object, knocking down skittles with hands (in a game).
event 2	<u>Event 2</u> - neutral - e.g. something falls, somebody drops in (on M and C).
JA ()	<u>Joint Activity</u> (): Both M and C are mutually engaged in an activity (specified) e.g. watching television, baking, playing with 'Leggo'.

Establish/Maintaining Contact

- approach Approach: C walks to or runs up to M from at least three feet away, when it is apparent from the context that this is not just accidental. M is said to approach when she moves towards C, regardless of whether C is still or moving. (Definition of M approach based on Blurton-Jones^{and Leach} 1972).
- folo Follow: C walks or runs towards M who is moving away from him and/or the room, within five seconds of her leaving. After five seconds has elapsed, C is said to leave the room.
- look Look: M or C looks at the other. This may involve re-orientation of the whole head so that the face is directed to the person being looked at. (Based on Leach, 1972) Includes quick glances, stares and mutual looks.
- sm. Smile: C smiles at or laughs with M. The different types and intensities of smile are not differentiated. However, smiles and laughs are thought to be indicative of a 'happy' relationship and are here given emphasis. Instances of M or C laughing to themselves are also recorded.
- Epu. Elicit pick up: C "holds its arms up rather straight, slightly in front of the head-body plane, and usually simultaneously looks at M".

(Equivalent to "arms up" - Blurton-Jones and Leach, 1972). If C is already standing by M, only one arm may be held up, if not, the gesture is made as C walks to or runs towards M.

watch Watch: M or C focusses their whole attention on the other who is engaged in an activity.

Contact

touch Touch: C makes physical contact with M, e.g. laying hand on M briefly, but does not involve gross bodily contact.

hold Hold: C is held by M, sitting on her knee, leaning or resting on M, climbing onto M and involves gross bodily contact.

cling Cling: C firmly holds onto M's clothing or part of her body and resists release. This may be accompanied by fearful behaviour and/or cries.

afc. Affectionate contact: M or C spontaneously hugs, embraces, ruffles hair of, strokes, cuddles or kisses the other. Includes C patting the baby's back or gently rubbing 'to bring up wind' after a feed.

Breaking Contact

look away Look away: M or C looks or turns away, or the whole body is re-orientated to face away from the other,

after having been in face to face interaction, or watching the other.

- lv. Leaves: C or M is said to leave the other if one has been in bodily contact or close to the other. Beyond this distance, M or C is said to leave the room.

put down Put down: Restricted only to M putting C down after hold. Excludes e.g. putting down from chair (see drag).

Attention-getting

tap Tap: A repetitive rhythmic movement of the fingers or with the palm, usually on M's arm; and the action is usually continued until M attends or listens to C.

lead Lead: M's hand or part of her clothing is grasped and pulled or tugged towards C, in an attempt that they go in the same direction.

Physical Control

manip. Manipulate: Direct manipulation of C's actions by moving its hands or arms, or snatching objects from C.

take over Taking over: - activity of child.

drag Drag off: Pull Child away or towards, remove from room or bring into room. Also remove from chair.

place Placement: Beckoning, pointing, tapping seat.

strike Strike: Smack or push or kick.

Distance (of C in relation to M)

close Close: C is said to be close to M if he is in bodily contact, or within 18 inches of her (approximately her arm length).

near Near: $1\frac{1}{2}$ - 4 feet away from M.

far Far: More than 4 feet away from M.

ous. Out of Sight: Not within mother's view, and often far.

Plan: Classification and Description of Utterances

Exclamation	Information 1	Organise -3
Verbalisation	Information 2	Coalition
Sing	Information 3	Judgement +1
Read	Information 4	Judgement +2
Names	Request 1	Judgement +3
Call 1	Request 2	Judgement -1
Call 2	Request 3	Judgement -2
Show 1	Attend	Judgement -3
Show 2	Reply	Judgement self +
Demonstrate	Agree 1	Judgement self -
Gives	Agree 2	Seek Judgement
Attention-seeking	Agree 3	Complaint
Comment Self 1	Agree 4	Tease +
Comment Self 2	Comply 1	Tease -
Comment object	Comply 2	Claim 1
Comment other 1	Comply 3	Claim 2
Comment other 2	Disagree 1	Nurturance 1, 2, 3, 4, 5
Comment both 1	Disagree 2	Play Comment
Comment both 2	Disagree 3	Play Question
Comment (favourable)	No Comply 1	Play Information
Comment (disapproval)	No Comply 2	Play Organise
Comment (counting)	Repeat	Play Justification
Comment Situation	Repeat (self)	Play Judgement +
Unclassifiable	Repeat (other)	Play Judgement -
Question 1	Organise +1	Play Offer
Question 2	Organise +2	Play Thanks
Question 3	Organise +3	Play Sympathy
Question 4	Organise -1	Play Comment object
Question 5	Organise -2	<u>Categories involving</u> <u>new-born</u>

Note: Order in which definitions are presented is from top to bottom of columns, and left to right.

- call 2 Restricted only to calling of pets (real) by M or C, e.g. "pussy-pussy!". Distinguished from calling of inanimate objects (see Play Comment Object).
- show 1 Show (of objects only). The object is extended, pointed at or raised to be seen, and may be accompanied by "Look!", "Watch", "See". Includes showing of object made e.g. 'fire-engine', or painting 'the man with wobbly legs'.
- show 2 Restricted only to C showing or pointing in response to Questions by M.
E.g. M and C 'reading', C points in response to M: "Where is the lion?"
- demo. Demonstrate: Showing how to e.g. 'holding a pencil, or in a game, M: "You have to knock down the skittles like this."
- give Gives: Extension of an object, distinguished from show 1 (when action is complete in pre-speech). The object is held out for the other person to grasp and is then released, or it may be placed on M's lap. It may also be accompanied by e.g. "Here you'wa mummy", "There you are".
- Giving in response to Requests 1 and 2 or Organise is classified as Comply.
- att-seek Attention-seeking: Demand for attention on one's self or one's activity. It may be in the form of:-

1. A directive, e.g. C: "Look me" (doing somersaults).
2. Calling the other by real name only, e.g. "Mummy!" "Andrew"; usually when the person being called is not attending or responding, distinguished from Call 1.

Comment: non-controlling statement

CS1 Comment self: expressions relating to one's physical, emotional state and needs, e.g.

"I'm hungry"

"I feel a lot better"

"I need a wee wee"

CS2 Expressions about one's own past, present and future actions and intentions, and objects related to them.

e.g. C: "I do wee wee in hospital"

C: "I done it before"

M: "I'll go and put it off" (television)

C: "I have to draw this here"

C: "I'll iron baddie"

C: "Play in the sand"

C obj. Comments about objects (persons and events) not used in one's action and not in answer to Questions, although initiator may be looking at it.

e.g. M: "It's broken" (looking at cup)

C: "The milk is boiling over!"

C: (of observer) "She is writing"

M: "It's raining outside".

C01 Comments about the other's needs, physical and emotional state.

e.g. M: "Your nappy needs changing"

M: "You're tired boy".

C02 Comments about the other's past, present and future actions and intentions; also objects related to them.

e.g. M: "You nearly fell off again"

"You're drawing circles"

"You got four left"

C: "Missed again!"

M: "Oh dear".

CB1 Comment by M or C on their mutual physical states and needs.

e.g. M: "We have run out of Ribena"

C: "We are the people".

CB2 Comment by M or C on past, present and future mutual actions and intentions; also objects related to them.

e.g. "We went to the doctor yesterday"

"We're going to see Sandy"

"We are the winners!"

C: "We'll stand them up" (M and C playing skittles together)

CA General favourable comments.

e.g. "Here's a good song"

"That would be nice"

Distinguished from Judgement +1 (i.e. not about actions or products).

CD Disapproval - of situations, objects, other persons or events.

e.g. M: "What a mess"

C: "I don't like it"

C: "I hate painting"

Distinguished from Judgement -1 (i.e. not about actions or products) and Judgement Self - (i.e. self-blame).

CX Counting during C's own play, distinguished from M counting (see Information 2).

C sit Comment Situation: Includes:

1. General comments during or after one's own action, not necessarily directed at the other, and often while one is distant from the other.

e.g. M: (having finished dusting says) "Right then"

C: "Well . . . now"

2. All other general comments on situations

e.g. M: "That's it . . . done".

C99 Unclassifiable.

Questions

Q1 Questions about the other's physical, emotional states and needs.

e.g. "Are you warm enough?"

"Are you tired?"

"Are you happy?"

Q2 Questions relating to the other's (ongoing) action or intentions, distinguished from Organise 1.

e.g. "What are you doing?"

"What's that you have written down?"

"What will you build now?"

C: "Are you going to bake a nutty cake?" (To M who is already in the process of baking).

- Questions of the form - "Do you want. . .?" and involving choice are classified as Nurturance 1, except when M (or C) is clearly trying to change the other's activity, e.g. M: "Do you want a sore head?" (to C banging his head) = Organise -1.

Q3 Questions by M to C, about objects and events, whose function is to teach the child.

e.g. C: (looking at a picture of a man shaving),

M: (asks) "What's he doing?"

"What is it called?"

"What colour are the skittles?"

"Now how many does that make?"

"What does daddy do?"

Q4 All questions about objects, persons and events - requiring factual information, and those relating to the person asking the question.

e.g. "Where's my book?"

"Is that a speaker?"

"Did grandma give us this?"

"Is it raining outside?"

Also included is the question form "Why?" in response to Information 1 and Comments.

e.g. C: "Why?" in response to M: "We have to go out to the shops". Question 4 also includes all questions not already covered in Questions 1, 2, 3 and 5.

- "Why?" in response to Organise or Request is usually a form of refusal (see Disagree 3).

Q5 Question form usually tagged on at the end of a statement, Question or question form seeking clarification or confirmation.

e.g. ". . . shall we?", ". . . hasn't she?", ". . . right?", "What's that? . . . mii?"

"mii?" and "ey?" may also be classified as Request 3 (if not tags).

Information

Info 1 Direct answer to Questions 1, 2, 3 and 4; and question forms seeking clarification (Rq. 3); seeking Justification (Disagree 3) and Seek Judgement.

e.g. 1) C: "No" in response to M: "Are you hungry?"

2) M: "Dad's name" in response to C: "What have you written down?"

3) C: "A girl" in response to M: "What's that?"

4) C: "Five" in response to M: "How many skittles are left?"

5) M: "It's under your bed" in response to C: "Where's my blue car?"

- 6) C: "I said. . ." in response to M: "What did you say?"
- 7) M: "Because I need it" in response to C: "What for?"
- 8) M: "Yes" in response to C: "Do you think this is nice?"

Info 2 Teaching, by M to C.

- e.g. 1) On functions of objects - "It traps your voice" (tape-recorder).
- 2) Numbers, letters and colours.
 - 3) Concepts of likeness/difference.
 - 4) About animals.

Does not include answers to Questions, except when M is answering her own Question 3.

- Teaching in the form of Organising, e.g. M: "Write M for monster", or directing C to complete an utterance is classified as Organise +2

Info 3 Teaching about the rules of a game.

- e.g. M: (of skittles) "You have to stand them up"
- M: "No looking, no looking" (playing hide and seek with C)
- M: "You have to stand up here".

Info 4 Justification: M or C spontaneously justifies, qualifies or gives a reason for her own statement or action, not in answer to the other seeking justification (see Disagree 3) and not in the form of threats (see Organise -3), e.g. M: ". . . or you'll fall and hurt yourself". C: ". . . because I need a house for my toy soldiers."

Request

- Rq 1 All polite requests - for permission or advice.
 e.g. "Can I. . .?", "May I please. . .", "Excuse me"
 Excludes 1) Requests to get the other to do something
 e.g. "Please close the door" (see Organise +1)
 2) Requests to stop an activity
 e.g. "Don't touch it please" (see Organise -1)
- Rq 2 All vocal demands for a specific thing, or own action.
 e.g. C: "Juice", or "I want to dust there".
 Demands for the other to act are classified as Organise.
 Demands in the future, e.g. C: "I want to take this to
 Grannie's" are classified as intentions (see Comment
 Self 2).
- Rq 3 Requests for repetition, seek clarification or confirma-
 tion - about the rules of a game or something the other
 said.
 e.g. "Sorry I didn't hear"
 "You mean. . .?"
 "What?"
 "Pardon?"
 M: "Where's Stevie?" (from tone) in response to
 C: "Where's Stevie?"
 Includes: "Are you sure?" C: "Mii?", M: "Ey?"
- att. Attend: M responds to C's stimulation or statements
 in a way that indicates definite awareness of C (or C
 responds to M in this way); often while carrying on

with an on-going activity.

Of the nature "Hold on", "Wait a second".

Also includes e.g. "What is it?", "What's the matter?"
in response to C crying, usually over a distance.

reply Reply: Short non-committal, not in agreement or refusal, e.g. "Oh", "Mii", "I see.

Includes answering to one's real name in response to Call 1.

Agree

- A1 Agree - usually in one word, e.g. "Yes", "Mihi" with:
Exclamation e.g. M: "Yes" in response to C: "Okoko".
Also with Name, Comment, Information, Judgement,
Complaint, Tease, Claim, Play Comment, Play Information,
Play Judgement.
Also affirmation of tag question (Question 5) and
accepting offer or choice (Nurturance 1).
May include agreeing with Show, but excludes agreeing
with Attention-Seeking, Request, Organise, Play Organise
(see Comply).
- A2 Repeat Name, Comment, Show, Information, Comply 2,
Accept blame, Judgement, Judgement Self, Claim,
Play Comment, Play Information, Play Judgement in
agreement; distinguished from Repeat, Repeat (self),
and Repeat (other).
e.g. 1) C: "A monkey" in response to M: "A monkey".

- 2) M: "You be the man on the moon" in response to
C: "I be the man on the moon".

Includes (1) Reduction of M's utterance by C.

e.g. C: "Buy something" in response to M: "You are
going to buy something at the shops".

(2) Extension of C's utterance by M.

e.g. M: "It's a red piggie", in response to C: "piggie".

(3) Correction of C's utterance by M.

e.g. M: "same make" in response to C: "They're the same
make-up".

A3 Cheeky last word.

e.g. C: "Never mind that".

M: "Och I know."

A4 Accept blame.

e.g. C: "Martha" in response to M: "Who did that?"

or M: "Mummy is a twit" in response to C: "You spilled
the salt."

Comply

C11 M or C immediately behaves in the manner, place and
time specified by the other's Show 1, Attention-Seeking,
Request 1 and 2, Organise, Play Organise.

e.g. M looks in response to C: Showing object.

M looks in response to C: "Look me mummy".

C gives in response to M: "May I have that?"

M sits in response to C: "Mummy sit".

C stops in response to M: "Stop doing that".

C creeps on the floor in response to M: "You can creep on the floor and be a crocodile."

C12 Delayed with reason or modified.

e.g. M: "After your tea" in response to C: "I want another biscuit".

or M: Well you have to move baddie this way . . ."
in response to C: "I want to iron".

C13 Only after initial delay, grumble, refusal or Seek Justification (Disagree 3).

e.g. C: "Alright but I don't want to"

M: ". . . Well, if I must".

Disagree (not concerned with truth value)

Disag 1 Contradict, disagree mildly with: Name, Show, Demonstrate, Comment, Information, Judgement, Complaint, Tease, Claim, Accept blame (A4), Comply 2, No Comply, Tag Question (Q5), Play Comment, Play Information, Play Judgement, Play Justification. Also includes refusing Offer choice (Nt1); and refusing Play Offer; distinguished from No Comply.

e.g. 1) M: "That's not a taxi" in response to C: "a takti"

2) C: "You don't do it like that" in response to
M: "This is how you do it".

3) C: "No it isn't" in response to M: "It's snowing outside".

- 4) C: "Yes they can" in response to M: "Babies can't walk when they're born".
- 5) C: "No it's not" in response to M: "What a messy picture!"
- 6) M: "No I didn't" in response to C: "You knocked down my bus".
- 7) C: "No I'm not" in response to M: (smiling) "You're a wee monster".
- 8) M: "It's not" in response to C: "My turn!"
- 9) M: "No you didn't" in response to C: "I broke it"
- 10) C: "I want it now" in response to M: "After your dinner".
- 11) M: "Yes you do" in response to C: "But I don't want to".
- 12) C: "No" in response to M: "Lovely isn't it?"
- 13) M: "I'm a lion" in response to C: "You tiger".
- 14) M: "No he didn't" in response to C: "The giant took the little girl away".
- 15) C: "Yes she can" in response to M: "Dolly can't knock any down".
- 16) M: "He hasn't" in response to C: ". . . because he's done dudus in it".
- 17) C: "No" in response to M: "Do you want peas for lunch?"
- 18) M: "No thank you" in response to C: "More tea?" ("pretend tea").

Disag 2 Firm disagreement, emphatic - with all categories listed for Disagree 1. Also asserting one's self.

e.g. C: "It's horrid!" in response to M: "This is a nice box".

M: "That'll do" in response to C: "But this is not a blue one".

C: "Yes it is" in response to M: "That's not it".

Disagreeing with actions or intentions usually takes the form Organise -, with the other's productions Judgement - and with requests No Comply.

Disag 3 Seek justification to Requests, Judgement, Tease, Comply 2, No Comply and Organise, usually as a way of refusing or disagreeing - initially. (Distinguished from No Comply).

e.g. 1) C: "What for?" in response to M: "Can you please pass me the pen?"

2) C: "Why?" in response to M: "That's wicked!"

3) C: "Why?" in response to M: "You little misery"

4) M: "Why?" in response to C: "Don't take it off".

No Comply

NoCl 1 M or C does not, or refuses to act in accordance with Show 1, Attention-Seeking, Requests 1 and 2, Organise, Play Organise.

e.g. 1) C: (does not look) in response to M: "See this little butterfly".

2) M: (does not look at C) in response to C: "See I'm jumping".

- 3) M: "No" in response to C: "May I do this?"
- 4) C: "I don't want to" in response to M: "Come here for a minute".
- 5) C: "No" in response to M: "You can dress up dolly and take her shopping".

NoCl 2 Of same nature as NoCl1 - with reason, modification or alternative.

- e.g. 1) M: "I can't just now, I'm busy" in response to
C: "See what I'm doing".
- 2) M: "There isn't any more" in response to
C: "Want a drink".
- 3) M: "No you finished it love, and it's no good for your teeth" in response to
C: "I want a sweetie".
- 4) M: "You can use some plasticine today" in response to C: "Give me play dough Mummy".
- 5) C: "I like that" in response to
M: "Stop doing that".

Repeat

Rep Repeat: An utterance is said to be repeated, when it is reproduced in essentially the same form as before, by the same speaker - either because the other did not hear or because it failed to evoke the desired response. Thus "Is that a speaker mummy?" after "Is that a speaker?" - is classified as Repeat (Q4).

rep(self) Repeat Self: Repeating one's own utterance, usually in a playful manner, and distinguished from Repeat.

rep(other) Repeat Other: Repeating, imitating what the other has just said (not in Agreement - See A2)

e.g. C: "What is it?" in response to M: "What is it?"

M: "Muu" in response to C: "Muu".

Organise: Speech aimed at getting the other
+ to do something or to change their
activity.

May be in the form of:

- Org +1
- Suggestion, e.g. C: "Let's roll it along this way"
 - Implied command e.g. "I would put it on the floor" or "Perhaps you could move it".
 - Question e.g. M: "You are going to build a car?" when C is not already engaged in building a car.
 - Request for help or Implied request, e.g. C: "I can't . . .", but not in response to being Organised.

(See No Comply 2) C: calls mummy and shows problem.

Does not include: (1) Complaints

(2) Statements aimed at the child's well-being e.g. "Be careful", "Mind your fingers" (See Nurturance 2).

Org +2 Command, firm order, e.g. C: "Give it to me,"

M: "Pick it up", M: "Come on."

Includes 1) e.g. M: "Please?" in response to C: "I want"

and may also take the form: "What's the magic word?"
or "What do you say?"

(2) M reading, singing or reciting verse, pauses
for C to complete.

e.g. M: "Once upon a time, there were two little boys,
one was called Joachim and the other was called - "

or M: "Baah baah -"

or M: "Rain rain -"

Org +3 Peremptory command, may be angry and impatient (from
tone of voice and facial gesture).

e.g. M: "Enough is enough!"

M: (shouting) "Katie!"

Organise: Speech aimed at stopping an activity

-

Org -1 Mild and friendly, warning.

e.g. "I wouldn't. . .", "I shouldn't. . .", "Perhaps
you could stop. . .", "Do you mind not to. . ."

or M: "That pepper will make you sneeze".

or M: "Do you want a sore throat?" in response to

C: (making guttural play noises).

or by inclusion of an affectionate term: "Don't gulp
it lovie."

Org -2 Firm order.

e.g. M: "Don't you dare".

C: "Stop that".

M: "Nicky!" in response to C: (carrying on with
an activity after he's been told to stop).

Org -3 Angry, impatient, threatening - usually with intention to inflict pain or punishment.

e.g. M: "No-no-no!"

M: "I mean it"

M: "I'll take it away from you"

M: "I think you want a smack"

Coal Coalition: M employs persuasion through attribution
e.g. "You're a big boy" or coalition with daddy, other relative or observer as a means of gaining control over C.

e.g. "Daddy will not like that"

"Show Sally that you can . . ."

"Sally will never come back again if. . ."

Judgement: Direct approval of C's or M's
+ action or product, encouragement.

J+1 Mild, often one word.

e.g. of picture: "Good", "Nice"

or action: "That's it", "That's the idea",
"Almost".

J+2 Longer, more enthusiastic.

e.g. "That's very good", "That's a lot better!",

Includes compliments, e.g. "You're nice mummy".

J+3 Very enthusiastic.

e.g. "That's smashing!", "Really super!", "That's the first time you've ever done anything like that!"

Judgement: Direct criticism, disapproval of
 - C's or M's action or product

- J-1 Mild and friendly, e.g. "That's a bit messy"
 or "You're not supposed to do that"
 or "Very cunning but not cunning enough" (with a smile)
 or M: "You know what that is" in response to
 C: "What is that?"
- J-2 Stronger, more condemning.
 e.g. M: "Now that's very bad"
 M: "That's your own fault for not sitting properly"
 in response to C: (falling from chair)
 M: "You're being a baby now"
 C: "That's cheating".
- J-3 Angry.
 e.g. M: "You naughty little thing!"

Judgement Self \pm

- JS + Self praise, expression of pleasure on achieving.
 e.g. C: "That's a good boy" (of himself)
 C: "I done it!"
 May also be conditional, e.g. C: "Daddy might be
 pleased to see me dusting".
 or non-verbal, e.g. clapping one's hands for one's self.
- JS - Self blame, disapproving comments about self.
 e.g. M: "I am not very good at this"
 C: (of herself) "Nicky is a baddie"
 M: "I can't. . ."

Seek J Seek Judgement: e.g. of one's productions.

"Do you think this is nice?"

"Do you like my picture?"

"Is that good?"

Cp Complaint: About conditions or things being wrong
e.g. drink too hot - which doesn't seem to imply that
the other should do something about it or correct the
situation; distinguished from Organise +1.
e.g. C: "A keeps bobbing up and down" (of own socks)
M: "You've a stinky nappy".

Tease \pm

tease + Tease +: Adverse judgement given in a friendly or
playful manner, distinguished from Judgement -1 and
Organise -1.

e.g. M: "What's this? A big sleepy boy!" in response
to C: (approaching and leaning on M)
or M: (Smiling at C) "You're a wee monkey".
or M: "Now that's brilliant!" in response to
C: (who's missed knocking down any skittles in game)

tease - Teasing with the intention of annoying, irritating or
provoking.

e.g. C: (laughing and continuing to switch off observer's
tape-recorder, even after being told to stop)
or C: 'sticking out tongue' at M.

Claim: usually in a game situation

claim 1 For the self to take precedence, or demanding as one's own.

e.g. M: "It's my turn"

C: "I have to do it!"

claim 2 Allowing the other to take precedence.

e.g. M: "It's your shot"

C: "You can try again"

M: "Have another try"

Nurturance: Behaviour indicative of a warm, caring and friendly relationship

Nt 1 Offer choice

e.g. M: "What would you like to do now?"

M: "Do you want me to . . .?" (i.e. accepting the other's right to choose or refuse).

Excludes 1) e.g. M: "Do you want a sore throat?"

when it's obviously aimed at stopping an activity (see Organise -1).

2) Offering choice in a fantasy/game context.

e.g. C: "More tea?" (see Play Offer).

Nt 2 Counselling, advice - not controlling.

e.g. M: "You may be better off with these"

or for the child's well-being "Be careful", "Mind your fingers". Emphasis is on the child rather than the object. Hence excludes, e.g. "Mind those glasses" (Organise -1).

Nt 3 Greetings, thanks.

e.g. C: "Hello mummy"

M: "Thank you"

Nt 4 Helping with difficult or necessary task.

e.g. M: Joins 'bricks' together for C.

C: Helps M putting toys away.

C: "I got ash-tray for you".

Nt 5 Sympathy, caring after accidents, including comments.

e.g. M: "Mummy will kiss it better"

M: (stroking C) "There, there", "Oh dear",
"Bless you".

Includes question forms, e.g. M: "You bumped your head?"
(attending to C); and apology.

Play Categories ('Make-believe')

- Statements and questions made in a fantasy/game
context by both M and C, not real.

(Distinguished from play - manipulation of objects.

See Classification and Description of Acts.

Pl.Com. Play Comment: Includes:-

1) The first suggestion of a game, i.e. initiating.

e.g. M: "Ring-ring, ring-ring, somebody on the phone
for you Lianne".

or C: (calling M by play name) "Tiger Tiger".

or M: "Where's Jenny gone?" in response to

C: 'hiding'. Also includes tickling.

2) Spontaneous fantasy information.

e.g. C: "I am a fireman".

C: "Prudence (doll) said, I want to go outside".

3)

e.g. M: "Getting warmer . . . yes getting hot" in response to C: (looking for object during 'hide and seek').

Pl.Q. Play Question

e.g. M: "What are you?" in response to C: "Meiow!"

or M: "Why is the little girl crying?" in response to

C: "And there's the little girl . . . crying".

or M: "What do you need at the shops?" in response to C: "Going shopping".

Pl.Info. Play Information: Fantasy information in answer to Play Questions

e.g. C: "I am not a tiger" in response to

M: "What are you?"

or C: "The doctor's friend took the little girl . . . and through the jungle . . . and . . ." in response to M: "Who took the little girl?"

May also include answer to real Questions, and thereby refuse to accept blame.

e.g. C: "The little boy next door" in response to

M: "Who left the water running in the bathroom?"

Pl.Org. Play Organise: Organise, counselling in the form of play.

e.g. M: "You can creep on the floor and be a crocodile" in response to C: "Cocodilo".

- or M: "Call dolly, see if she answers you".
- or M: "You'll need to wash her", in response to
C: "Maggie (doll) is awfully dirty".

Pl.Jn. Play Justification: Exploration, justification in the context of play.

- e.g. M: ". . . because my house is burning down".
- or C: ". . . because teddy has done dudus in his nappy".

Play Judgement ⁺: Of M's or C's play actions or products

- Pl.J+ e.g. M: "How clever dolly is, she's knocked two down".
in response to C: "Dolly has knocked skittles down".
- or M: "Well done firemen!" in response to
C: "We've put the fire out".

- Pl.J- e.g. M: "What are you doing ironing at the table for?"
in response to C: ('pretend-ironing' at the table)
- or M: "You haven't made any soup".

Pl. offer Play Offer: Includes:-

- 1) Offering choice in a fantasy context.

e.g. C: "Do you want coffee or soup?"

M: "More tea?" ('pretend-tea')

- 2) Giving, in a fantasy context.

e.g. C: "Here you are" (giving a 'pretend cup of tea').

Pl.Th. Play Thanks: e.g. Thanking for 'a pretend cup of tea'
or for 'putting out a pretend fire'.

Pl.Symp. Play Sympathy

e.g. M: "Poor firemen" in response to C: "The fire-engine has turned over!"

or M: "Poor nurse, hope she is alright" in response to C: "Nursie fell out".

Pl.Com.Obj Play Comment Object

Includes all vocalisations by M or C, directed at objects or pets (real). Maybe in the form of:
Greeting e.g. C: (looking at tape-recorder) "Hello teabag machine".

Calling e.g. C: "Duster duster!"

or M: "Dolly - where are you?"

Organising e.g. C: "Teddy just stay there".

Further categories - Involving the New-born

The fore-going category system was extended to include interaction with the baby - by the use of prefixes or suffixes:

- BT - An utterance addressed to the baby by M or C
- BTB - To the baby about its own action/state/objects
e.g. M: "You're smiling" - CO2BTB
- BTBC - To the baby about its own action in relation to C
e.g. M: "You're smiling at Johnny" - CO2BTBC
- BTBM - To the baby about its own action in relation to M
e.g. M: "You're smiling at me" - CO2BTBM
- BTCB - To the baby about C's action in relation to it
e.g. M: "Your brother is going to play with you" - CO2BTCB
- BTMB - To the baby about M's action in relation to it
e.g. C: "Mummy is going to give you a bath now" - CO2BTMB
- BTC - To the baby about C
e.g. M: "Your sister is very clever" - J+2BTC
- BTM - To the baby about M
e.g. C: "Mummy is coming" - CO2BTM
- BTMC - To the baby about M's and C's mutual action in relation to it
e.g. M: "We're taking you for a walk" - CB2BTMC

- BA - An utterance about the baby, by M or C
- BAB - About the baby's own action/state/objects
e.g. M: "The baby is smiling" - CO2BAB
- BABC - About the baby's own action in relation to C
e.g. M: "The baby is smiling at you Johnny" - CO2BABC
- BABM - About the baby's own action in relation to M
e.g. C: "The baby is smiling at you" - CO2BABM
- BACB - About the baby, and C's action in relation to it
e.g. M: "Are you waving at the baby?" - Q2BACB
- BAMB - About the baby and M's action in relation to it
e.g. M: "I'm going to change the baby's nappy" - CS2BAMB
- BAMC - About the baby and M's and C's mutual action in relation to it
e.g. M: "Shall we give the wee man his dinner?" - Rq1BAMC

- SibC - An utterance about the baby and C together
e.g. M: "You and Nicky woke up very early today" - CO2SibC
- SibM - An utterance about the baby and M together
e.g. C: "You waited for me with David (baby)" - CO2SibM

- Att-Seek BT - Calling the baby by name, or 'baby' or affectionate term
e.g. C: (looking at baby) "Wee Tom"
- Att-Seek BA - Calling for the other's attention on baby
e.g. M: "See his hair is falling out"
- Att-Seek C(B) - Demand for baby's attention on C
e.g. M: "See big brother"
- Att-Seek M(B) - Demand for baby's attention on M
e.g. C: "See what mummy is doing"
- COF(BA) - False information about or to the baby, malicious
e.g. C: "The baby is crying" (when he is not)

Chapter 8

Mother-First child Interaction during 'babyfeed' and 'baby sleep'

INTRODUCTION

When this study was devised, it was on the basis of anecdotal evidence, which suggested that older children behaved differently when the baby was present and being fed, compared to when it was asleep and/or out of sight. Some of the instances cited included the older child wanting to sit on the mother's knee while she fed the baby, demanding things that necessitated the mother's getting up, and aggression towards the mother or the baby. Indeed, some child care experts look upon the feeding situation as a potentially difficult one. For example, Jolly (1975) advises mothers to plan feed times such that the older child has something to do at the same time (e.g. watch T.V.), whereas Spock (1969) advises to "fit in. . . some . . . feeds when he [the older one] is outdoors or taking his nap" (p. 308-309).

While the study to be reported here was in progress, Kendrick and Dunn (1980) published evidence showing that mothers and children did in fact interact differently in situations where the mother was involved with the baby, compared to when she was not. Amongst their findings were increases in positive friendly interaction, but also in conflict and confrontation between mothers and first-borns.

The study to be reported here was done with each mother-child pair on two consecutive days, one month after the birth

of the sibling. Thus on one day mother feeding the baby with the first child around was observed, and on the next the mother and first child together while the baby was asleep and/or out of sight. However, the order in which these were done depended very much on which of the two situations presented itself at the time of the visit.

METHOD

Subjects:

The same 17 children who comprised the main sample served as subjects. Their ages ranged from 19.25 to 51 months, with a median age of 28.75 months when 'baby feed' and 'baby sleep' were done.

Setting and Procedure:

The two sets of observations were done with each mother-child pair in the home. Each observation lasted a maximum of 30 minutes. However, if the feed ended before the 30 minutes was up, or the baby who had been sleeping awoke and was heard crying, the observation was curtailed.

(The rest of the procedure is the same as in Chapter 7.)

ANALYSIS

(Also as in Chapter 7.)

RESULTS

Basically the same questions were asked here as in Chapter 7. They are as follows:

1. Are there differences in the frequencies of mother and

child behaviours separately, when the baby is present and being fed compared to when it is asleep and/or out of sight?

- 2.(a) Are mother behaviours in the two contexts related to the children's age?
- (b) Are child behaviours related to age?
- (c) Are the differences in (1) above due to age?
3. Do comparisons of mothers and children on the same categories, yield consistent patterns in the 'feed' and 'sleep' situations?
4. When the frequencies of two levels of the same category differing only in intensity, or frequencies of two categories that are diametrically opposite are compared, do mothers and children separately, consistently function at one of the two levels and at one of the two extremes during 'feed' and 'sleep'?
5. Are there marked individual differences in mother and child behaviours in the two situations?

1. Mother Behaviours

The same 38 measures selected by the same criteria as in Chapter 7 (page 202), were compared between 'feed' and 'sleep'.

As can be seen in Table 8.1a, only two significant results emerged. The first was for the mothers to comment more on their own actions and intentions (Comment self 2) when the baby was asleep compared to when they were feeding it. Secondly, Joint activity, which involves both the mother and first child together occurred significantly more during 'sleep' than 'feed'.

Table 8.1a Quantitative Comparisons of categories during
baby feed and baby sleep : Mothers

Comment Self 2	Sleep > Feed	p = .05
Joint Activity	Sleep > Feed	p = .004

Table 8.1b Quantitative Comparisons of categories during
baby feed and baby sleep : Children

No. categories used	Feed > Sleep	p = .05
Child looks Mother	Feed > Sleep	p = .012

Table 8.2a Correlations between children's ages and
Mothers' scores for Feed and Sleep, separately

<u>Categories</u>	<u>Feed</u>	<u>Sleep</u>
<u>Name</u>	-.56 **	.04
<u>Agree 2</u>	-.52 **	-.48
<u>Organise +2</u>	-.54 **	-.27
<u>Information 1</u>	.48	.80 *****
<u>Repeat</u>	-.45	-.56 **
<u>Comply 1</u>	.49 *	.47

Table 8.2b Correlations between children's ages and
Children's scores for Feed and Sleep, separately

<u>Categories</u>	<u>Feed</u>	<u>Sleep</u>
<u>No. categories used</u>	.60 ***	.64 ****
<u>Question 4</u>	.58 **	.84 *****
<u>Repeat</u>	-.51 **	-.66 ****
<u>Request 3</u>	.73 ****	.66 ****
<u>Name</u>	-.56 **	-.49 *
<u>Comment Other 1</u>	.57 **	.05
<u>Question 5</u>	.56 **	.46
<u>Comment Other 2</u>	.28	.58 **
<u>Disagree 1</u>	.29	.61 ***
<u>Question 2</u>	.42	.57 **
<u>Request 1</u>	.33	.56 **
<u>Organise +1</u>	.12	.52 **
<u>Play (fantasy)</u>	.41	.61 ***
<u>Fuss</u>	-.24	-.57 **

* nearly significant

** $p \leq .05$

*** $p \leq .02$

**** $p \leq .01$

***** $p \leq .001$

It is possible to explain the second result by saying, the mothers not being involved with the babies, were able to devote attention to their first children and to engage in mutual activities. The first result however, is more difficult to explain. It could be that the mothers being aware of or sensitive to their first child's feelings regarding the feeding situation, refrained from making comments related to their actions, that is, comments to do with them feeding. But then they could have commented on their own past or future actions and intentions that were not related to their feeding the baby.

Child Behaviours

The same 33 measures selected by the same criteria as in Chapter 7 (page 204-5) were compared between 'feed' and 'sleep'. The results are presented in Table 8.1b. As with the mothers' behaviours, there were only two significant results. In the feed situation the children looked at their mothers more, and used a greater number of categories in their speech than in the sleep situation. The greater number of categories, could perhaps be attributed to the fact that the children spoke to their mothers more during 'feed'. This they did, but the trend was not significant.

A consideration of mother and child behaviours together

Surprisingly, the only quantitative differences in the behaviours of mothers and children between the 'feed' and 'sleep' situations amount to 4 out of 71. It could be argued therefore, that in a broad and quantitative sense, the mothers and children in this sample did not behave very differently in the two con-

texts. However, this argument is not totally correct. A number of behaviours which occurred non-significantly more during feed than sleep, were identical for both mothers and children. The children's comments on the other's state (Comment other 1) and on the other's actions and intentions (Comment other 2), were more often about the baby than the mother. Nevertheless, the fact that both mothers and children tended to Comment, Agree with each other, engage in fantasy (play), and look at each other more during feed, suggests that there might have been slightly more positive, chatty conversation during feed than sleep. Not being significant, this observation does not carry much weight. However, it is in line with, and the categories involved are comparable to, some of Kendrick and Dunn (1980). They reported significant increases in positive interaction (that is, joint attention, mutual looking, mothers "extending" comments on the child's action) between mothers and their firstborn children, when the mother was feeding the second child compared to the not-with-baby context.

Their other finding, however, that of a significant increase in negative interaction, also during the feed context, is not in agreement with the trends obtained in this study. Admittedly these negative trends are not significant in this study, but they tended to occur more during sleep than feed. Thus there was a tendency for mothers to be forceful in getting the children to do something (Organise +2) and in stopping them from doing something (Organise -2). Mothers also tended not to give reasons for refusing to comply (No Comply 1) and were

more condemning in their criticism of the children (Judgement -2). Children on the other hand, were inclined to be demanding (Request 2) and to Cry and Fuss more during sleep than feed.

2. First children's ages and Mothers' behaviours

Rank correlations between the ages of the first children and the frequency of mother behaviours in 'feed' and 'sleep' separately are presented in Table 8.2a. During feed, mothers identified objects by name significantly more to the younger children, as would be expected. Older children are more familiar with the names of objects (e.g. in picture books). Also during feed, mothers acknowledged the younger children's utterances by repeating or extending them (Agree 2), but in controlling the same children's behaviour employed orders and commands (Organise +2). During sleep however, none of these significant associations were maintained, and only the correlation between age and Agree 2 remained fairly high.

Two significant correlations emerged during sleep, which although at high levels during feed had not been significant. These were for mothers to repeat themselves more to the younger children, and to reply (Information 1) to older children. Although it is not clear as to why these relationships failed to reach significance during feed, except perhaps for the differential in context, they are both in the expected direction. Mothers repeat themselves more to younger than to older children (e.g. Snow, 1972) and the older a child gets the better he becomes at formulating questions, and therefore the more Information 1 he gets.

The two significant results reported for the mothers' behaviour in the comparison between feed and sleep (Table 8.1a), do not then appear to have been associated with the age of the first child. They were firstly, that mothers commented on their own actions and intentions (Comment self 2) and secondly, engaged in Joint activity with the children more during sleep than feed. Neither of these measures even attained a modest correlation in both feed and sleep.

First children's ages and first children's behaviour

Table 8.2b presents the correlations between age and behavioural scores of the first children for feed and sleep separately. It can be seen that older children consistently used more categories in speaking to their mothers, both in feed and sleep. Thus the first of the two significant findings reported in Table 8.1b, that children used more categories during feed than sleep, was more attributable to the older children. The second finding, that children looked at their mothers significantly more during feed than sleep, was however, not related to age. The correlations between age and frequency of looking at mother in both feed and sleep were extremely low.

A few other correlations deserve mention, either because they show consistency or are inconsistent in the two situations. Questions requiring factual information (Question 4) and requests for clarification or confirmation of what the other has said (Request 3), were significantly and positively related to age in both feed and sleep. Repeating one's own utterance was significant and negative in both contexts, and Name which

was significantly and negatively related to age in feed, just missed significance in sleep. It appears therefore, that in terms of the children's age-related functioning on Question 4, Request 3, Repeat and to a lesser extent on Name, the two very different contexts had minimal effect.

Some measures however, were markedly and differently affected by the two situations. Some of these measures were: commenting on the other's actions (Comment other 2), polite requests (Request 1), Disagree 1 and Fuss, which were significantly related to age in sleep, but only moderately so in feed. The relation between age and these measures then, was significantly disrupted by the feeding situation.

Summary

More child behaviours were related to age than were mother behaviours to the children's ages, in the two contexts combined (18 vs. 5). That is, the verbal categories the children used in speaking to their mothers, were more associated with age whereas the mothers' speech to their children was less dependent on the children's ages, in terms of the significant correlations obtained. In fact the only two behaviours for which significant correlations were obtained for both mothers and children, in the same context, were Name during feed and Repeat during sleep.

Some child behaviours were consistently related to age in both feed and sleep, but none of the mother behaviours were. Further, a number of both mother and child behaviours that were significantly related to age in one context were not significantly

related in the other context. It was suggested that the specific situation disrupted the age relation with these measures.

In answer to the original question (2c) therefore, (page 279), the children's use of a greater number of categories during feed was related to age, whereas looking at mother was not. Mothers' commenting on their own actions and engaging in joint activity with the children, both of which occurred significantly more during sleep than feed, were both not related to the children's ages.

3. Comparisons of mothers and children on the same categories

A number of categories that were common to mothers and children were selected for comparison. Thus the frequency with which a mother used a specific category was compared with her child's use of the same category. This was done for all mother-child pairs, for feed and sleep separately. A number of the comparisons produced the same consistent and significant result in both feed and sleep. For example, mothers commented on their children's activities (Comment other 2) and asked questions about these activities (Question 2) during feed and sleep, significantly more than the children commented and asked about the mothers' activities. Our interest, however, is not on the consistent patterns, but the five comparisons that were significant only in the one context (Table 8.3). In four of these, the children engaged in the behaviours more than the mothers, and in one the mothers more than the children.

During feed, the children pointed out objects for mothers

to see (Show 1), identified these objects by name, and sought attention on themselves and their activities (Attention seek); all these more than the mothers did. In addition, they were more non-compliant than mothers (No Comply 1). Perhaps children in general name, show and attention-seek more than their mothers do, but the question is why these patterns should be significant only during feed. In the case of attention seek it could be argued that since the mother was feeding the baby, her whole attention could not have been on the first child. One way for the first child to command attention then, would be to say - "Watch me. . .", or simply call the mother by name (= Attention seek). Maybe name and show 1 served a similar function (amongst other functions) as attention seek. By drawing attention onto an object, some attention might be afforded to the speaker too.

Table 8.3 Mothers' vs. Children's category usage at
Feed and Sleep separately

	<u>Feed</u>	<u>Sleep</u>
<u>Name</u>	C > M p < .008	C > M ns.
<u>Show 1</u>	C > M p = .002	C > M ns.
<u>Attention seek</u>	C > M p = .004	C > M ns.
<u>No Comply 1</u>	C > M p = .002	C > M ns.
<u>No Comply 2</u>	M > C p = .022	M > C ns.

The one behaviour that mothers engaged in more than the children and that was significant only in the feed context, was No Comply 2. That is, instead of just refusing, for example

to grant children's requests, mothers gave reasons for refusing or offered alternatives to the original requests. That this was significant only in feed and not in sleep is itself interesting. A possible explanation is this: having been offered an alternative or the reason for a refusal, it is likely the child would not persist in its demand. Such persistence would interrupt the feed and could eventually create tension all round. Therefore it would be an eventuality worth avoiding, especially while the mother is feeding the baby.

For two children only, the frequency of No Comply 2 was greater than their mothers' during feed. During sleep, the number of children went up to three but fewer mothers engaged in No Comply 2, hence the comparison was not significant. This finding, together with the general absence of negative behaviours during feed, strongly suggests that the mothers in this sample 'actively worked' at avoiding confrontation during feed more than during sleep.

4. Qualitative comparisons of categories

Frequencies of categories that differed only qualitatively were compared, for mothers and children separately. These comparisons were of interest for two reasons:

- a) To see whether mothers and children separately, consistently functioned at one of two levels within a category (e.g. Organise +1 rather than Organise +2) and at one extreme of two opposing categories (e.g. Comply 1 rather than No Comply 1), in both feed and sleep.
- b) To highlight individual differences in styles of interaction.

Results pertaining to the mothers will be presented first, followed by the children's.

Mothers

Table 8.4a presents the results of comparisons between categories used by the mothers, for feed and sleep separately. Five styles were consistently significant in both contexts. These were, for mothers to get their children to do something by asking them in the nicest possible way, rather than stopping their actions, again in the nicest possible way (Organise +1 > -1). Mothers also complied immediately (Comply 1) more often than with delay (Comply 2) and not complying (No Comply 1). Finally they mildly praised their children's actions rather than enthusiastically (Judgement +1 > +2), and also criticised more in a friendly manner than severely (Judgement -1 > -2).

Some styles were significant only in the one context. Thus during feed, mothers commented more on their children's actions than on their own (Comment other 2 > Comment self 2) and strongly approved of these actions more than they strongly disapproved (Judgement +2 > -2). Although these trends were maintained during sleep, they were not significant. Also during feed, mothers gave reasons for not complying (No Comply 2) more often than they simply refused to comply (No Comply 1) but this too was not significant during sleep.

Unlike the five styles that were significantly consistent both during feed and sleep, and were therefore characteristic of the mothers as a group rather than the context, the three just mentioned patterns that were significant only during feed were probably more influenced by the particular situation. In

a way it could be said that in talking about what their children were doing and in approving of these actions, the mothers expressed interest in and encouragement of their children's activities significantly more during feed than sleep.

In stopping the children from doing something though, the tendency was for the mothers to issue firm orders, both during feed and sleep (Organise -2> -1). This is similar to the style mothers show at the 3 Post observation, rather than either 3 Pre or 6 Post. Further, during feed there was a significant tendency for boys more than girls to be firmly prohibited from continuing an activity (8 boys vs. 1 girl) ($p = .04$). This suggests either that boys more than girls were 'naughtier' during feed and hence more firmly controlled, or that the mothers of boys were more impatient and therefore prohibited firmly rather than mildly. During sleep however, this significant sex difference was not obtained.

Another pattern that was not significant, but more interestingly showed a reversal in the two contexts deserves mention. This was for mothers to mildly approve rather than disapprove of their children's actions during feed (Judgement +1> -1) but to mildly disapprove rather than approve during sleep.

Children

Table 8.4b presents the results of comparisons between categories, for the children as a group and for feed and sleep separately. Like the comparisons for mothers, some patterns were significant in both feed and sleep, and others only in the one context. Again like mothers, children complied immediately

Table 8.4a Comparisons of Categories: Mother

<u>Categories</u>	<u>Feed</u>	<u>Sleep</u>
<u>Organise +1 vs -1</u>	Org+1>Org-1 p=.05	Org+1>Org-1 p<.008
<u>Comply 1 vs No Comply 1</u>	Cl1>NoCl1 p<.004	Cl1>NoCl1 p=.002
<u>Comply 1 vs Comply 2</u>	Cl1>Cl2 p<.004	Cl1>Cl2 p=.012
<u>Judgement +1 vs +2</u>	J+1>J+2 p=.004	J+1>J+2 p=.002
<u>Judgement -1 vs -2</u>	J-1>J-2 p<.004	J-1>J-2 p<.008
<u>ComSelf 2 vs ComOther 2</u>	C02>CS2 p=.008	C02>CS2 ns.
<u>NoComply 1 vs NoComply 2</u>	NoCl2>NoCl1 p=.004	NoCl2>NoCl1 ns.
<u>Judgement +2 vs -2</u>	J+2>J-2 p=.04	J+2>J-2 ns.
<u>Organise +2 vs -2</u>	Org+2>Org-2 ns.	Org+2>Org-2 p=.008
<u>Agree 1 vs Agree 2</u>	A2>A1 ns.	A2>A1 ns.
<u>Question 3 vs Info. 2</u>	Info 2>Q3 ns.	Q3>Info 2 ns.
<u>Organise +1 vs +2</u>	Org+1>Org+2 ns.	Org+1>Org+2 ns.
<u>Organise -1 vs -2</u>	Org-2>Org-1 ns.	Org-2>Org-1 ns.
<u>Comply 2 vs No Comply 2</u>	NoCl2>Cl2 ns.	NoCl2>Cl2 ns.
<u>Judgement +1 vs -1</u>	J+1>J-1 ns.	J-1>J+1 ns.

Table 8.4b Comparisons of Categories: Child

<u>Categories</u>	<u>Feed</u>	<u>Sleep</u>
<u>ComSelf 2 vs ComOther 2</u>	CS2>C02 p<.004	CS2>C02 p<.008
<u>Request 1 vs Request 2</u>	Rq2>Rq1 p=.012	Rq2>Rq1 p=.036
<u>Comply 1 vs No Comply 1</u>	Cl1>NoCl1 p=.036	Cl1>NoCl1 p=.022
<u>No Comply 1 vs No Comply 2</u>	NoCl1>NoCl2 p<.004	NoCl1>NoCl2 p=.006
<u>Play (objects) vs Joint Activity</u>	Play>JA p=.004	Play>JA p=.036
<u>Agree 1 vs Agree 2</u>	A1>A2 p=.022	A1>A2 ns.
<u>Organise +1 vs +2</u>	Org+1>Org+2 ns.	Org+1>Org+2 ns.
<u>Smile vs Cries+ Fuss</u>	Smile>Cryfuss ns.	Smile>Cryfuss ns.

more often than they did not comply (Comply 1 > No Comply 1) in both feed and sleep. Unlike mothers however, they talked about their own actions and intentions more than they referred to those of their mothers (Comment Self 2 > Comment Other 2); and when they did not follow directives, they simply refused to comply rather than justify their actions (No Comply 1 > No Comply 2) - both these in the two contexts. Again in feed and sleep, children demanded (e.g. "I want . . .") more than they employed the polite form of request (Request 2 > 1). The low occurrences of both not complying with reason (No Comply 2) and polite requests (Request 1) are not surprising. Both require a level of linguistic sophistication that only comes about with age. Both these categories were positively related to age, although significant only in one instance (that is Request 1 during sleep). The last pattern that was significant, both during feed and sleep, was that the children amused themselves and played on their own, more than they were involved in joint activity with their mothers. This again is not surprising, because although the mothers were occupied during feed, the amount of time any mother can devote to joint activity in any one day must be limited. Hence one would expect almost all children to play on their own more than with mother.

Finally, one pattern though not significant, deserves mention. This is that in the midst of all the stress brought about by the presence of the sibling, there was still a tendency for most children to smile and laugh more than to cryfuss in both contexts.

Cryfuss = cries + fuss

5. Individual differences

As in the other studies done in this thesis, marked individual variation was observed at feed and sleep. The same two styles that were used to single out mothers in Chapter 7 were used here. They were:

- (i) mothers who criticised their children's actions
(Judgement -) more than they praised and encouraged
(Judgement +).
- (ii) mothers who controlled negatively (Organise -) more than positively (Organise +).

In addition, any other unusual behaviour shown by a mother or child was included.

The same format as was used in Chapter 7 is used here. That is, individual profiles, not groups are presented.

The ages after the children's names are their ages at feed, that is, at 1 month post-birth. The individual profiles are presented not by age but such that individuals showing a behaviour in common are adjacent to each other. Here are the profiles:

1) Timothy (2 yrs. $4\frac{3}{4}$ months)

During feed, Timothy's mother made comments about the baby's actions more than she commented on Timothy's actions. Even when the baby was asleep, and therefore not physically present, this mother's comments (Comment other 2) which amounted to 5.1 percent of her total speech, were still about the baby, and not once did she comment on Timothy's actions. In this behaviour at sleep, she was an exception amongst all mothers. Further, she tended to stop Timothy's actions (Organise -2 > +2

at feed); (Organise -1 > +1 at sleep) and disapproved more or as much as she approved of these actions at sleep. (Judgement -1 > +1; Judgement -2 > +2).

Timothy on the other hand, showed more non-compliance than compliance at feed (No Comply 1 > Comply 1), and during sleep engaged in both these behaviours equally. Also during sleep he did not once comment on his own activities (Comment self 2) or his mother's (Comment other 2), and play noises (Exclamation) and incomplete utterances (Verbalisations) together ranked highest in his speech.

2) Morag (2 yrs. $3\frac{3}{4}$ months)

Like Timothy's mother Morag's commented on the baby's actions more than on Morag's during feed. Both during feed and sleep she gave orders more than she asked in a nice way (Organise +2 > +1), and indeed at sleep Organise +2 had the highest rank of all her behaviours.

Morag differed from all the other children in one respect at sleep. She cried (screaming and shrilling), and engaged in this more than any other behaviour.

3) Martin (3 yrs. $7\frac{1}{4}$ months)

Martin's mother was the third who commented more on the baby's actions than on her first child's actions during feed. Also during feed and sleep, she mildly criticised more than she mildly praised his actions (Judgement -1 > +1).

The only behaviour that Martin himself engaged in, and which was different from that of the other children, was to interrupt the recording by switching off the tape recorder five

times in succession towards the end of the feed visit.

It can be seen that the one behaviour that stands out amongst the three mothers just presented, is that they talked about the baby's actions more than the child's. Now when the older child can obviously engage in more varied and interesting activities than the month old baby, in talking about the baby more, it appears these mothers may have been a little more insensitive. Granted there are other ways in which they could have and probably did, show interest in their child's activities, e.g. asking questions (Question 2), but in engaging in behaviour that emphasises the baby's physical presence, they are likely to have made the child feel 'left out'. It is this kind of behaviour that probably arouses jealousy in the older child.

4) Marian ($21\frac{3}{4}$ months)

Unlike most mothers, Marian's mother talked about her own actions (Comment self 2) more than Marian talked about her own, both at feed and sleep. Further, during feed, more of the mother's comments were to do with her and the baby, rather than just her actions alone. She also tended to mildly criticise more than she mildly praised (Judgement -1 > +1), both during feed and sleep.

Marian herself, and unlike any other child, did not once comment on her own action (Comment self 2), the mother's or the baby's (Comment other 2), either at feed or sleep.

5) Luke (3 yrs. 1½ months)

Like Marian's mother, Luke's commented on her own actions in relation to the baby more than she talked simply of her actions, during feed.

Luke himself appeared to have exhibited no behaviour that was markedly different from that of the other children, either during feed or sleep.

6) Thomas (4 yrs. 3 months)

Like Marion's and Luke's mothers, Thomas's commented about her own actions in relation to the baby more than she talked just of her own actions. However, unlike them, she did this during sleep and not during feed. That is, she talked more of her actions and intentions in relation to the baby when the baby was asleep and out of sight, rather than her own actions per se.

Thomas, in turn, asked questions to do with the baby's actions and intentions (Question 2) more than those relating to his mother's actions, also during sleep.

Having suggested that Timothy's, Morag's and Martin's mothers in commenting more on the baby's action than the child's were likely to arouse jealousy in the older children, it is difficult to say whether the same effect would be obtained in the case of Marian, Luke and Thomas. In their case, the mother would say for example, "I'm just going to get the baby up" (i.e. Comment self 2 plus reference to the baby) more often than comments of the type, "I am going to wash the dishes". Since referring to the baby in relation to the mother's action

appears to be informative, rather than drawing attention onto the baby which was the case in the former, the second group of children probably felt less jealous. However, this is only speculative, and the effect on the two groups might have been the same.

Thomas and his mother probably enjoyed talking about the baby though, both were actively involved.

7) Ian (2 yrs. 0 months)

Ian's mother was one of two who, in speaking to her first born during feed, made absolutely no reference to the baby. Also during feed she prohibited Ian as often as she ordered him (Organise -2~~5~~+2), and both during feed and sleep respectively mildly criticised more than and as equally as she praised (Judgement -1~~7~~+1; Judgement -1~~2~~+1).

Like his mother, Ian made no reference to the baby during feed, but in addition neither during sleep. In making no mention of the baby both at feed and sleep, he was an exception amongst all children. Also during sleep he refused to comply as often as he complied (No comply 1~~2~~ Comply 1).

8) Peter (2 yrs. 2 $\frac{3}{4}$ months)

Peter's mother was the other one who made no reference to the baby during feed.

Also like his mother, Peter made no mention of the baby at feed, and in fact talked to the investigator more than to his mother on this visit.

In comparison with the two 'groups' already mentioned, Ian's and Peter's mothers are at the other extreme in not

mentioning the baby at all. It is questionable whether it is in fact wise to ignore the baby's presence as totally as they did, especially in the case of Ian who was not exactly enamoured with his baby sibling as the other studies will have shown.

9) Louisa (2 yrs. 8½ months)

Both during feed and sleep, Louisa's mother employed firm commands more than suggestions (Organise +2 > +1). Indeed when all her behaviours were ranked, Organise +2 had the second highest frequency both during feed and sleep. Further, she also strongly disapproved of Louisa's actions more than she strongly approved (Judgement -2 > +2), both at feed and sleep.

Louisa herself does not appear to have engaged in any behaviour that was markedly different from that of the other children. However, it may be worth noting that Verbalisations (unclear and incomplete utterances) ranked highest in her speech during feed.

10) Jimmy (20¾ months)

Like Louisa's mother, Jimmy's employed firm commands more than kindly suggestions (Organise +2 > +1), both during feed and sleep. Further, Organise +2 ranked highest and fourth highest for feed and sleep respectively. She also tended to mildly criticise rather than praise during feed (Judgement -1 > +1), and to be more condemning than encouraging during sleep (Judgement -2 > +2).

Like a number of other children however, Jimmy does not appear to have been outstandingly different on any behaviour.

11) Caroline (3 yrs. 4 months)

During feed, Caroline's mother prohibited her child's actions both mildly and firmly more than she controlled positively (Organise -1> +1; Organise -2> +2). Still during feed, she also criticised both mildly and strongly more than and as much as she encouraged (Judgement -1> +1; Judgement -2> +2). During sleep, this pattern did not change much, and Caroline was stopped as often as she was ordered in her actions (Organise -2< +2), and still criticised more than she was praised (Judgement -1> +1; Judgement -2> +2).

Caroline herself appears not to have engaged in behaviour that was markedly different from that of other children.

12) Philip (3 yrs. 9 $\frac{3}{4}$ months)

Like Caroline, Philip is another one whose actions were frequently prohibited. Both during feed and sleep, his mother tended to stop his activities both mildly and firmly more than or as much as she positively controlled (Organise -1> +1; Organise -2> +2), and also mildly criticised more than she praised (Judgement -1> +1).

Apart from refusing to comply more than he complied (No Comply 1 > Comply 1) during feed, Philip's behaviour does not seem to have been different from that of the other children.

In the last four profiles, the mothers seem to feature highly on control and criticism, and are therefore quite different from the preceding ones. On the whole the children's behaviour does not appear to be very different from that of the other children, but since it is unlikely that they were

controlled and criticised for doing nothing, it can only be assumed that the behaviours that led to their being controlled and criticised were not picked up here. No doubt a sequence analysis would reveal what these behaviours were, but this is not being done here.

It may be noticed that the profiles for five mother-child pairs were not presented. The children concerned are:

Simon (19 $\frac{1}{4}$ months)

Penny (20 $\frac{1}{2}$ months)

Sarah (2 yrs. 0 $\frac{3}{4}$ months)

Jane (2 yrs. 5 $\frac{3}{4}$ months)

Charity (2 yrs 11 months)

Their exclusion does not imply that there was nothing outstanding or different. For instance, Penny's mother was the only one for whom the most frequent behaviour and therefore the highest rank at feed was Judgement +1 (mild praise and encouragement), and Charity was the only one who did not play with objects during feed, although she engaged in fantasy (play). However, in terms of the styles and behaviours on which selection was based, these five did not feature.

DISCUSSION

The mothers and children studied here, showed few quantitative differences in behaviour when the feed and sleep situations were compared. Apart from joint activity which occurred significantly more during sleep than feed, the other three behaviours are not adequately explicable in terms of the feed or sleep context. These behaviours were that mothers commented

on their own actions more during sleep than feed, and the children used a greater number of categories in their speech and looked at their mothers more during feed than sleep. The children's use of a greater number of categories was related to age, but the other three behaviours were not. It was suggested that there appeared to have been a trend towards mothers and children being involved in positive interaction more during feed than sleep, but as was mentioned, this observation was based on non-significant results. In general, and in terms of the significant results, the findings reported here are not in agreement with those of Kendrick and Dunn (1980). When they compared the situation in which the baby was being fed with one in which the mother was not involved with the baby, they found significant increases both in positive and negative interactions during feed. These results were not obtained here. Although just more than half of the babies in their sample were being bottle-fed rather than breast-fed (23 vs. 17), and differences were found in mother-first child interaction between these two groups at feed, a number of mother-first child pairs in the breast-feeding group must have shown the same behaviours as the bottle-feeding group, for the sample results to be significant. Therefore their results were obviously not entirely due to the bottle-feeding group. In the study that was done here, the majority of mothers breastfed rather than bottle-fed (14 vs. 2), and the seventeenth mother combined the two. The obvious question is whether the results that were obtained here were due to this greater proportion in the breast-feeding group. It is

possible, but probably not the whole answer.

A number of behaviours that were related to age in the one context, ceased to be related in the other context. For example, during feed, mothers identified objects by name and issued commands, both to the younger children more than to the older, however at sleep these associations were not obtained. Apart from these two behaviours for which the correlations were significant in the one context, the same tendency for an age-relation to be disturbed occurred even for those behaviours that were only moderately correlated with age, and not significant. These disruptions in correlations were not due to the behaviours occurring at a lower frequency in one situation compared to the other. Indeed most were behaviours that were common to both situations. Further, the disturbance could not have been a developmental change, not in the space of 24 hours. This then leaves only the particular context as having given rise to the disturbance.

That the particular context had an effect, obtains a little support from the results on comparisons of categories between mothers and children, and the qualitative comparison of categories. In the former, mothers more than children engaged in some behaviours, and children more than mothers on others. However, on a few behaviours, e.g. Name, Show 1 and Attention-seeking, the pattern was for children to engage in these significantly more than mothers at feed, but not significantly more at sleep. On these behaviours then, the context had an effect.

Similarly, mothers and children interacted at some 'levels' consistently and significantly in the two contexts, but on a few behaviours, the pattern was significant only in the one context. This was more so for mother behaviours than children's. However, even with the non-significant patterns, reversals in the trends from one situation to the other were not common.

Some comments have already been made in connection with individual differences. A fuller discussion on these, however, will be presented in Chapter 9, where an attempt to integrate the various individual variations from all the other studies will be made.

In summary, therefore, although the mothers and children studied here showed few differences in behaviour (in a quantitative sense), between the feed and sleep contexts, these two contexts had some effects. They took the form of firstly, disruptions of some age-relationships, both in the way the mothers interacted with children of different ages, and in the children's age-related behaviours. Secondly, some patterns of interaction between mothers and children, and some qualitative styles' were also disrupted. Therefore, there were some differences in the behaviours of the mothers and children studied here, but on the whole these differences were rather subtle.

Chapter 9

Final Interview and Individual Differences

INTRODUCTION

The final interview which was conducted 8 months after the birth of the sibling, focussed on the first born children's reactions to and interactions with their 8 month old siblings. Being 8 months after the sibling births, it was expected that the impact on the first child of acquiring a sibling would have abated, and the first child would have become used to having the sibling around. It was also expected that by this stage the mother would have become used to having the two children, and routines would be more clearly established than shortly after the birth. Also unlike at the earlier interview (two-weeks post-birth), the sibling could not just be fed and tucked away out of sight. At 8 months he would be more alert and more responsive to his environment; he would be wakeful for much longer periods and therefore bound to be physically present a lot of the time. It was also expected that the sibling might be mobile at this stage, and therefore quite likely to be getting into the first child's possessions and interfering with his older sibling's play. The attainment of this mobility stage, and the possibility of different forms of interactions developing between mothers, first children and siblings, were mostly responsible for the study being terminated at this point.

Apart from presenting the results pertaining to the 8 months post-birth interview, the latter part of this chapter will deal with individual differences. Due to the nature of the study, more information is available on the mothers and children of the Main Sample than the Interviews Only group. For this reason, the section on individual differences will relate only to the Main Sample.

METHOD

Subjects

Out of the original 32 children, 29 served as subjects for this final interview. Two families emigrated and one family moved house and could not be contacted. Thus out of the original 17 children in the Main Sample, 16 remained: 8 boys and 8 girls. Their ages ranged from 26.25 to 58 months with a median age of 35.75 months. Out of the original 15 children in the Interviews Only group, 13 remained: 7 boys and 6 girls. Their ages ranged from 24.75 to 57.5 months with a median age of 39 months when their siblings were 8 months old.

A copy of the questions that made up the Eight-month Post-birth interview is in Appendix 6. As with the Two-weeks Post birth Interview, the Eight-month Post-birth Interview was done only with the mothers during scheduled home visits. The whole interview was recorded on a portable tape-recorder and later transcribed for analysis.

RESULTS

Table 9.1a shows that 8 months after the birth all the siblings were said to be interested in having their older brother or sister around. Expressions like "She beams with delight", "His eyes absolutely light up" and "A great grin breaks over her face" were typical of the baby's reaction when the older sibling appeared on the scene. Most siblings then played well together, with the older maybe entertaining the younger and nearly half of the mothers in the two groups combined found that it was easier for themselves when the two siblings were together (see Table 9.1b). For the other half of mothers, problems were said to arise some of the time. These incidents were over toys or either the child occasionally rolling the baby over and upsetting the baby or to do with the child's own mood and state.

Only three mothers reported that they found it more difficult when the two siblings were together. For example, if Alan built a castle, his little brother would knock it down, which upset Alan. Jane's little brother often wanted the toy that his sister was playing with, and Jane in turn often teased her little brother till he cried. Mick on the other hand became irritated and unhappy when his little brother made a noise.

However, even with these three exceptions, mothers often stressed the advantages of the siblings having each other, rather than the disadvantages.

Contrary to my expectations, Table 9.1c shows that

only about half of the young siblings in both groups were crawling at 8 months. Nevertheless, crawling was not necessarily a prerequisite for interference on the part of the young sibling. Indeed, out of the ten younger siblings in the Main Sample who were said to interfere a lot with the older's play, only three could crawl. The other seven managed to interfere a lot through rolling or reaching, especially if the older was near, and with the help of the 'baby walker'. In the Interviews Only group, however, all the six who were said to interfere a lot could also all crawl.

Most children found it irritating and annoying when their young siblings interfered with their play. In some cases they did not even like the sibling touching or playing with anything they considered theirs. If the two children in the Main Sample whose young siblings were said not to interfere and therefore according to the mothers did not have to 'retaliate' are excluded, it can be seen from Table 9.1e that 10 out of the remaining 14 responded to interference by snatching or grabbing back a toy, for example.

In the Interviews Only group, only 4 out of the 13 responded to interference by snatching back. The rest either moved away from the baby, protested to the mother or told the baby off, often in combination. Only one child, Nigel, who at Two-weeks Post-birth was said to clearly resent the baby and showed largely 'negative' reactions, was reported at 8 months to push and hit the baby if she interfered.

Few mothers said they did little or nothing if the baby interfered with the child's play (see Table 9.1f). Of those in the Main Sample, Jimmy's mother said the baby did not interfere so she did not have to do anything, Marian's and Peter's mothers said the two children snatched back anyway, but the latter added she would tell Peter off and insist on his giving another toy in exchange if the baby became upset. In the Interviews Only group, Mick's mother also did little or nothing because Mick snatched back anyway, while Nigel's mother said she would reprimand if he was too rough with the baby, otherwise she did nothing. It can be seen therefore, that when Marian snatches back a toy her mother does nothing; Mick's mother, who finds it more difficult when the two children are together, also does nothing when Mick snatches back a toy; and Nigel, whose reaction to the baby's interfering includes pushing and hitting, is reprimanded only if he is too rough. The rest of the mothers behaved differently in this situation. Some who felt that it was unfair for the child not to be able to play undisturbed, removed or distracted the baby. Others told the child to move away and maybe play at a table where the baby could not reach or encouraged the child to give the baby another toy, instead of just snatching.

It should, however, be noted that the way the mother reacts may vary from one situation to the next. As one mother put it: "You can't stop to analyse each one. . . and you simply react whether or not you make the right decision at the time." Thus a mother who will remove the baby in

one situation, may tell the child to move in another situation.

If the baby was doing something naughty, like pulling a book out of the bookshelf or heading towards the rubbish bin, most children were quick to tell the baby off. With statements like: "You're not to have that you'll eat it baby", or "We're always having this argument", clearly some children enjoyed this 'adult role'. After telling off, the next most common responses were stopping the baby by, for example pulling it away, and telling the mother (see Table 9.1g). Only two children, Marian and Alan, were said would push and hit the baby in this context.

If the baby was in a potentially dangerous situation, e.g. near the radiator, most children told the mother or more often called out to her (Table 9.1h). Few children dealt with this situation themselves, and unlike their reactions when the baby was naughty, were protective towards their young siblings.

From Table 9.1i it can be seen that the range of reactions shown by the children if the baby was upset, was generally evenly distributed for the two groups combined. About the same number of children got upset too as those that showed variable reactions; and the number who showed concern was about the same as those who were generally not bothered, except if the baby was hurt. Nigel, however, was again an exception, in usually telling the baby off and asking the mother to remove the baby.

None of the children, however, including Nigel, were said to definitely and always enjoy seeing the baby upset.

Table 9.1j shows that the majority did not. The few who were said to be sometimes gleeful if the baby was upset, did so especially if they had caused it.

Paradoxically, upsetting the baby was common and about half of the children from both groups did so often (see Table 9.1k). However, except in some cases where the child was maybe in an objectionable mood and set about deliberately to upset the baby, it was not always intentional. For example:

M: "He's a bit prone to putting things on top of her . . . em . . . covering her face over with that rug she plays on . . . em . . . this can start off as a peek-a-bo game . . . and . . . but . . . he has a sense of experiment and he'll take it on too far until she gets cross . . . without him actually meaning to."

Thus children would repeatedly pretend to give the baby a toy and then take it back, roll the baby over or push him along, and what started off as a game accompanied by laughs would end up with the baby being upset.

In the same way that the children would continue a game until the baby became upset, the majority also did things which seemed or were meant to be kind but ended up upsetting the baby (see Table 9.1l). The most commonly reported were rather enthusiastic cuddles during which the baby's neck or ears were squeezed, and continuing to give the baby a drink when it was choking.

All the children except two were said to help their younger siblings to play, either frequently or some of the time (see Table 9.1m). They did this by bringing toys to the baby or putting them within reach, pointing things out in books, winding up toys or simply jumping up and down and thus amusing the baby. The two exceptions were Ian and Nigel. Ian, it was said, would bring toys to the baby if the mother asked him to do so, but she could not think of times when he had done it spontaneously. Nigel, on the other hand, answered the question himself.

Here is an extract from the transcript:

Interviewer: "Does he help the baby to play?"

Nigel: "No I don't."

Mother: "No he doesn't."

Interviewer: "Why don't you help the baby to play?"

Nigel: "Because sometimes she scratches me . . . and pulls my hair. . . (After a little pause)
 . . . Well . . . she does her poo poos in the morning."

(Interviewer and Mother laugh)

The mothers were asked what happened if they left the room, leaving the child and baby alone together. From Table 9.1n it can be seen that for the two groups, 15 out of 29 continued to play happily together or separately and 10 out of 29 sometimes played well and at other times upset the baby. Two children, Marian and Timothy were said usually to follow mother. The two children who, when left alone with the sibling, upset inevitably resulted, were

again Ian and Nigel. Ian it was said, usually ended up rolling on top of the baby, and Nigel, who was often rough with the baby, would do things like bash her over the head with a cushion. However, knowing an upset could result did not stop any of the mothers from leaving the children and siblings alone together. They would simply look in from time to time and/or listen out for unhappy noises.

The question on what the child usually does when mother is playing with the baby, could not always be scored in terms of what the child usually does. Indeed some children were said to usually react in one way, but others were said to sometimes react in one way and sometimes in another way. Table 9.1p shows the frequencies of responses precisely in the terms they were given. Combining the two groups and ignoring the difference between "sometimes" and "usually", it will be noticed that "comes to join in" occurs most often (18), followed by "continues with his own activity" (13). "Comes to disrupt" when mother is playing with the baby comes next and shares an equal rank with "wants to take over from mother" (6). "Wants attention on self" and "the mother tries to involve the child as well" both share the same rank and occurred with the least frequency (5). However, if one argues that "taking over from mother" in the sense of the child wanting to do with the baby what the mother is doing with it, and "wanting attention on oneself" are forms of disrupting the mother and baby; then the children in these two groups joined in as much as they disrupted (18 vs. 17).

Note: For the preceding question and the ones relating to the father, N = 15 for the Main Sample due to a faulty recording.

It will be seen from the Interview schedule that questions dealing with the father were also included (see Appendix 6). The results, based on the mother's responses about the father, are presented in Table 9.1q-u).

A number of mothers found it difficult to say whether their husbands were seeing more or less of the children since the babies were born. Just less than half of the fathers from the two groups were thought to be seeing more of the children and spending more time with them, and for about the other half this was thought not to have changed. One father was said to be seeing less of the child, Crispin, due to his working hours.

Apart from one child out of the 29 who was said never to have been keen on his father, none had become less keen. Most were said to have become more attached, and out of the nine who were said not to have changed towards their fathers, three were said to have been very attached anyway. Most of the mothers who had reported that their children became more keen were, however, quick to add that whether this change was due to the baby or to the children getting older was debatable. "A lot of the children were at a pro-daddy stage anyway, and as they had got older their fathers could do more with them, including going out together on their own" they argued.

Half the children from the combined samples were said to mind if the father played with the baby and they were excluded or at a time when they wanted attention too. (See Table 9.1s) Out of the four who it was said, definitely did mind, Marian and Louisa were said to take exception to their fathers playing with the baby more than to mother playing with the baby. The other two who were said to mind were Timothy and Nigel.

Using the same format as was used for when mother was playing with the baby and ignoring the difference between "sometimes" and "usually", it can be seen that "comes or asks to join in" occurs most often (19), followed by "continues own activity" (11). Next comes "disrupt" (7), "father tries to involve child as well" (5), "wants attention on self" (4), and "take over from father" (3). If again it is considered that "taking over from father" and "wanting attention on oneself" are forms of disrupting, then the children in the two groups join in slightly more than they disrupt (19 vs. 14) when the father is playing with the baby.

Finally, the mothers were asked if their husbands may be then did more to help in the house or with the children. Some laughed. As can be seen from Table 9.1u, 10 out of 28 were said to help little (if at all) with the children or in the house, but 14 out of 28 were said to help a little more. Four fathers, namely Marian's, Sarah's, Louisa's and Lorna's who had always helped a lot, both with the children and in the house, were said to continue doing so, and had showed no change.

Table 9.1Results

	<u>Main Sample</u>	<u>Interviews Only Group</u>
a) <u>Is baby interested in having older sibling around?</u>		
Yes, very much so	16	13
Variable	0	0
Not really	0	0
b) <u>Is it easier for mother when baby and older sibling are together?</u>		
Yes, generally	5	6
Variable	9	5
Not really, more difficult	1	2
No different	1	0
c) <u>How mobile is the baby?</u>		
Baby crawls	5	8
Baby rolls, reaches	6	2
Baby mostly sits	5	3
d) <u>Does baby interfere in first child's games?</u>		
Yes, lots	10	6
Sometimes	1	2
Not really	5	5

Table 9.1 cont.

	<u>M.S.</u>	<u>Int. O.</u>
e) <u>If baby interferes, what does first child do?</u>		
Snatches toy back	10	4
Protests to mother	2	5
Tells baby off	2	5
Pushes baby away, hits	0	1
Tells mother to remove baby	1	2
Child moves away from baby	4	6
f) <u>If baby interferes in child's games what does mother do?</u>		
Removes baby or distracts baby	6	9
Tells the child to move away	2	4
Encourages child to exchange toy	8	2
Does little or nothing	3	2
g) <u>If baby is doing something naughty what does child do?</u>		
Does nothing, may encourage	1	1
Actively tries to prevent	6	8
Tells baby off	11	10
Tells mother	7	6
Pushes or hits baby	1	1

Table 9.1 cont.

	<u>M.S.</u>	<u>Int. O.</u>
h) <u>If child sees baby in danger</u> <u>what does he do?</u>		
Actively tries to prevent	5	3
Tells baby off	1	1
Tells or calls mother	7	8
Variable	0	1
Child is not aware of dangerous situations	1	2
Mother is not sure, situation has not arisen	5	1
i) <u>What does child do if baby is upset?</u>		
Gets upset too	3	5
Shows concern and entertains or tells mother	5	1
Not bothered, ignores	3	2
Tells baby off or asks mother to remove baby	0	1
Variable (i.e. may show concern and entertain, and other times not bothered or tells baby off)	5	4
j) <u>Does child enjoy seeing baby upset?</u>		
No	10	11
Sometimes	6	2
Yes definitely	0	0

Table 9.1 cont.

	<u>M.S.</u>	<u>Int. O.</u>
k) <u>Does child ever deliberately</u> <u>upset baby?</u>		
No	4	3
Sometimes	3	4
Often	9	6
1) <u>Does child ever do things which</u> <u>seem to be kind but end up</u> <u>upsetting the baby?</u>		
Does not occur	1	2
Sometimes occurs	11	7
Frequently occurs	4	4
m) <u>Does child help baby to play?</u>		
Very little	1	1
Sometimes	6	5
Frequently	9	7
n) <u>What happens if mother leaves child</u> <u>and baby alone together?</u>		
Mother knows upset is inevitable	1	1
Child usually follows mother	2	0
Child and baby play happily, together or separately	7	8
Variable (i.e. child may ignore baby and then upset him or play happily, depending on child's mood)	6	4

Table 9.1 cont.

	<u>M.S.</u>	<u>Int. O.</u>
p) <u>When mother is playing with baby</u> <u>what does child do?</u>		
Sometimes continues with his own activity	6	4
Sometimes comes to join in	7	5
Sometimes comes to disrupt	4	2
Sometimes wants attention on self	1	3
Usually continues with his own activity	1	2
Usually comes to join in	2	4
Usually wants attention on self	1	0
Usually wants to take over from mother	3	3
Mother tries to involve child as well.	5	0
<u>Questions relating to Father</u>		
q) <u>Has amount father sees of child</u> <u>changed since baby was born?</u>		
More	8	3
About the same	7	9
Less	0	1
r) <u>Has child become more or less keen</u> <u>on father since baby arrived?</u>		
More keen	9	9
Still the same	6	3
Less keen	0	0
Child has never been keen on father	0	1

Table 9.1 cont.

	<u>M.S.</u>	<u>Int. O.</u>
s) <u>Does child mind if his father plays with baby?</u>		
Does not mind	5	5
Minds if excluded or is wanting attention too	7	7
Definitely minds	3	1
t) <u>When father is playing with baby, what does child do?</u>		
Sometimes continues with own activity	7	4
Sometimes comes or asks to join in	6	11
Sometimes disrupts	3	4
Sometimes wants attention on self	2	2
Sometimes wants to take over from father	1	2
Usually comes to join in	1	1
Father tries to involve child as well	2	3
Child demands attention too, from mother	1	1
u) <u>Does father now help more in the house or with the children?</u>		
About the same (lots) in house and with children	3	1
More with the children	3	3
More with the children and in the house	3	5
Little help with the children and in the house	6	4

DISCUSSION

Sibling rivalry has received more attention than the friendly and warm relationships that can and do develop between siblings (Lidz, 1968; Thomas and Chess, 1977). Admittedly, the sibling pairs in this study were not yet at an age where they both actively engaged in squabbles or conflicts over possessions, but the general picture obtained from the mothers' reports, was one of more happy and positive interactions than hostile and negative ones. Thus the majority of children helped the baby to play by, for example, giving a toy, entertained the baby while mother got on with chores, and in almost every case, could make the baby laugh more intensely and more easily than any other member of the family. This last observation was also reported by Thomas and Chess (1977). The younger siblings on their part, were amused by their older siblings, and paid attention to their activities, a finding similar to that reported by Lamb (1978) for 18 month olds and their pre-school siblings.

That the older were so successful at entertaining the younger ones, particularly in making them laugh more than anybody else could is interesting. There are indications that the younger ones were able to recognise the older at this stage, but more than recognition must have been involved, because presumably the babies could also recognise their mothers and fathers at this time. A likely explanation is that older siblings compared to mothers and fathers engaged in different kinds of interaction with the younger siblings. Obviously some of these forms, e.g. jumping off/ a pile of cushions which the babies

found amusing, was engaged in only by the children, but it appears that the totality of their actions must have differed from those of mothers and fathers. In general then, most children appeared to get on well with their siblings, and although there were occasional problems, most mothers emphasized the companionship between them and the advantages rather than the disadvantages.

One situation which caused the older to be annoyed or irritated with the baby, was when the baby interfered with the older's play, or if the baby picked up something which the older regarded as his. Pushing the baby away and hitting was rare, and a number of children simply snatched the toy back and/or told the baby off. In so doing, it could be said that the older children were protecting what was theirs and fending for themselves. Sometimes the mothers removed or distracted the baby, on the basis that the older child should be able to play unmolested, but these were also occasions when mothers sometimes encouraged children to share and let the baby play with a particular toy, especially if the older had not been playing with it; or give another toy in exchange instead of just snatching; or indeed, to wait until the baby was no longer interested in the toy. Like one mother said, both children had rights, and it is through these interactions that children learn about sharing, lending and taking turns (Newson and Newson, 1968).

If the baby did something 'naughty', it was reprimanded, and most children appeared to enjoy this 'parental role'.

The next common response was to actively stop the baby from being naughty, and to tell the mother. Most people enjoy a position of power, and there is no reason why older children should not feel themselves to be powerful in relation to their 8 month old siblings, and therefore tell them off or stop them from being naughty. In telling the mother, however, this may have been for the mother's information, but it could equally well have been reporting on the sibling, so that he might be told off.

If the baby was in danger, however, most children told the mother or called out to her. Unlike 'telling on' the baby because he was being naughty, in this instance it was more a case of concern for the baby. Most children were also concerned if the baby was hurt and none enjoyed seeing the baby upset, except for the few who were sometimes gleeful if they had caused it. Such general concern with the baby's well being, although based only on the mother's reports in this instance, was observed by Dunn and Kendrick (1979) in children less than 30 months, when their siblings were 8 months old. A number of children who were reported to show such concern in the present study, were also less than 30 months old.

Incidences of the child upsetting the baby were reported, but a number of mothers also added that it was not so much a case of the child setting about to deliberately upset the baby, unless the child was already in a foul mood, but that it was often a case of a game being carried on too

far. Thus instead of stopping a game when the baby became unhappy, the older children would carry on until the baby cried. Now it is easy to understand how, if one is feeling a bit obnoxious, one can 'take it out' on another, and therefore deliberately upset the baby in this case. But continuing a game, after the baby has become unhappy is a little difficult to interpret. That the interaction started off as a game, implies that the child did not initially intend malice.

Children were also said to engage in behaviours that seemed to be kind but ended up upsetting the baby. The question is - what is gained by upsetting the baby? Perhaps attention. But then, if the baby is upset and crying, the mother is more likely to attend to and comfort the baby, rather than pay attention to the child, except of a critical nature. So maybe the children did intend simply to upset the baby out of ill will on occasions.

Most children felt left out when the mother or father played only with the baby. Thus they joined in in the play, about as much as they disrupted. In a way, this might have been a difficult time for the children. At 8 months, the babies would be more interesting as individuals than say at 2 weeks. They would vocalise and react more to those around them, and presumably this would be reciprocal. In this situation therefore, the babies would be capable of 'attracting' and 'commanding' attention, and if the older child needed attention at the same time, it would be necessary

to compete and therefore join in constructively or disrupt. If, on the other hand, the parent were to include the child as well, then presumably the child would not be left out and there would be no need to compete for attention. But few parents spontaneously included the child as well. This may have been because, in some instances, the child could not be included, e.g. if the mother was bouncing the baby on her knee. But equally likely, the parents may have felt that the baby now needed attention, and it was time the older child got used to this fact.

Finally a word about the father's role. About half of the fathers were helping more with the children and/or with housework at 8 months post-birth compared to when there was only the first child. Just less than half were said to hardly help with the children or the housework. The interesting thing is that, those fathers who always used to help, continued to help, and in fact most of the ones who were said to hardly help, had been like that even before the birth. Therefore with respect to helping, the fathers did not change much - either they were helpers or they were not. Of course this only relates to practical helping, other forms of helping, e.g. the father being supportive of the mother, and thereby influencing her relationships with both children, were not ascertained.

Individual differences

While the various studies that have been presented in this thesis have yielded results showing that the majority of the children studied were similarly affected by the sibling birth, marked individual variations were also seen to occur. Some of these have already been mentioned in the separate studies, and the aim here is to attempt to integrate the various patterns. Due to the massive amount of data available on the Main Sample, the process of integration has to be necessarily selective.

On the assumption that the mother-child relationships as well as the children's to their siblings were revealed at the Eight-months Post-birth interview, individual differences will be presented in relation to the results of this interview. In a sense it could be said that the Eight-months Post-birth interview assessed the outcome of the eight months interactions.

Table 9.2 presents the measures that were done in the study, and the names of the children whose behaviour was outstanding or different from the other children's in each of the studies. For example, the names of the children who were least disturbed on mother's return (based on the Two-weeks post-birth interview) are presented. It can be seen from the names in the table that some children feature more than others. Two separate groups, A and B, of children and mothers emerged.

Group A consists of the seven children in the Main Sample, who at 8 months Post were said to little or sometimes (as opposed to 'frequently') help the baby to play. The children and their ages at the sibling birth are as follows:

Simon	18.25 months	Louisa	31.5 months
Marian	20.75 months	Luke	36.5 months
Ian	23 months	Martin	42.25 months
Peter	25.75 months		

Apart from their characterisation at 8 months Post, this group also showed a number of behaviours in common at 2 weeks post-birth. Their immediate reactions to the birth was either a significant 'lack of symptoms' or else these were very marked. Three of the four children in the sample who appeared least disturbed on mother's return, are in this group. They are Peter, Simon and Martin. The fourth, Philip, was no longer in the sample at 8 months Post. In contrast to these three children, the only two in the sample who, apart from being generally disturbed on mother's return, were also aggressive (physical) to their mothers are in this group. They are Louisa and Ian. Consistent with the 'lack of symptoms' is the observation that three out of the four who never imitated the baby, and five out of eight who showed no regression at 2 weeks post-birth are also in this group. Marian and Louisa are the only exceptions in Group A who did show signs of regression.

Although a number of the children in this group showed this 'lack of symptoms', underneath they were clearly

disturbed. For example, Ian and Peter were said to be slightly pleased about the baby, but at the same time showed resentment. A number of mothers mentioned at 2 weeks Post that they did not cuddle the baby excessively in front of the first child, or else they complimented the child as well or engaged in "double cuddles", whereas Ian's, Marian's and Simon's mothers (all Group A) who recognised that their children were disturbed, simply refrained from cuddling the baby in front of these children. Martin, on the other hand, was said to ignore mother cuddling the baby, and unlike most children who were fascinated by the nappy change and often wanted to know and see what the baby had done, he ignored this as well.

The other studies done in this thesis, also show that for a number of mothers and children in this group, their behaviours verged on the extremes. For example, Ian and Peter and their mothers were the only pairs who during the 'feed' observation made absolutely no reference to the baby; whereas Martin's and Marian's mothers talked about the baby's actions more than the child's, and about own action in relation to the baby more than just own actions per se, respectively.

During the Standard Day Interviews, most mothers at one time or another 'included' or invited their children's participation (see p.187 for details on 'inclusion'). Three of the four children who were least 'included' across all three interviews are in Group A. Further, one of the

three, Ian, is the only child who never was once included in any of these interviews. It may be noticed from Table 9.2 that he and Martin (another Group A) were two of the four most 'disruptive' children during the same interviews. A notable exception in this group is Marian, who though being 'least included' was also 'least disruptive'.

In the "strange situation" of Ainsworth and Wittig (1969), 'the typically attached child' feels relatively secure with mother present when the stranger appears on the scene. When the mother leaves the room and the child is left with the stranger, such a child becomes upset. On mother's return, however, the child quickly recovers, and although play may not reach the pre-separation levels, the child is able to resume play. This is of course a very brief and simplified account. The limitations in these 'criteria' especially when applied beyond the infancy and early childhood periods have already been given (e.g. see Chapter 1). However, the aim in presenting a picture of the attached child is to highlight the behaviours of two of the Group A children. They are Marian and Ian, and their profiles in this situation have already been given (see pp. 143-145; 149). The point to note though, which is consistent with the group's dichotomous nature, is that while Marian was quite disturbed when the stranger appeared in Episode 3, when alone with her in Episode 4 and after mother's return (Episode 5), much more before the birth than after; Ian showed the opposite behaviour. Both before and after the birth, he appeared to be more comfortable when he was alone

with the stranger compared to being alone with mother, and when his mother returned the separation appeared to have had no effect in that he then explored more than in the initial episode with mother (Episode 5 > 2). Apart from a small attempt at week regain (defined on p. 103) in the pre-birth session, he reacted little to the actual separation.

Group A children as was earlier mentioned, were classified on the basis that they little helped their 8 month old siblings to play. In line with this maternal observation, children in this group, it was said, tended to ignore the sibling in mother's absence or else they ended up upsetting it. The only two exceptions to this pattern were Luke and Marian. Luke usually played well with his sister (more often she protested the mother's departure) and as will have been seen so far in this account, Luke himself shared little in common with the rest of the group, except for the basis on which the classification was done. Marian was said to usually follow mother, for example, if mother left the room. Finally, in response to the question on what the children usually did when the 8 month old sibling was upset, it emerged from the mothers' reports that this group of children tended to be sometimes gleeful, especially if they had caused the upset or else they were not too bothered.

Group B is made up of the five children in the Main Sample whose mothers reported at the Eight-months Post-birth interview that it was easier for themselves when the two children were together - that is, the child and sibling played well together.

The children and their ages at the sibling birth are as follows:

Timothy	27.75 months	Caroline	39 months
Charity	34 months	Thomas	50 months
Luke	36.5 months		

(Apart from Timothy who was at the median age, the rest were in the older age group.)

Unlike the children of Group A, Group B children were affected by the birth, but did not show the consistent 'extreme' responses. Three of the children: Luke, Caroline and Thomas, do not stand out in any particular manner (Table 9.2), but the other two - Timothy and Charity do. Both were very disturbed when their mothers held or fed the babies, and at the two weeks post-birth interview were said to show jealousy. This took the form of interfering with the feed either by wanting to sit on mother's knee and occasionally pulling the bottle out of the baby's mouth (Timothy); or making demands that necessitated the mother getting up (Charity). While Charity's mother reported at the two weeks post-birth interview that she often complied with Charity's requests, e.g. getting her a drink, taking her to the toilet during a feed (and was observed to do so about 2 weeks later), the behaviour of Timothy's mother deserves note. At the Two-weeks Post-birth interview she mentioned that she normally tried to distract Timothy's attention by, for example, feeding while he watched 'Play School' on television. However, two weeks later she was

observed to talk more about the baby than about Timothy during 'feed'. (See Table 9.2). Further, this behaviour was also observed during 'sleep' when the baby was not even present in the room, and also at 6 months Post.

While it is difficult to assign a causal link or its direction, Timothy's behaviour and his mother's at feed clearly points to the importance of considering the mother-child pair as a unit rather than as separate individuals.

Timothy and Charity also showed another behaviour in common. They were two out of the three children who showed least stability relative to the group, on dimensions of temperament from before to after the birth. This probably reflects their disturbance, but as with the other children in the sample, there was a tendency towards instability in temperamental styles at three months Post-birth.

Results from the Standard Day Interview are not very definitive with respect to the Group B children. However, it may be noticed (Table 9.2) that none of the Group B children feature amongst the "least included", unlike the Group A children; and in fact, two of the Group B children - Thomas and Charity - were amongst the four "most included". These two tended also to be "most disruptive" however, but as was mentioned earlier (p. 194) the relationship between 'inclusion' and 'disruption' is not yet clear. At 8 months Post and, apart from Caroline who was said to be sometimes gleeful if the baby was upset, in common with the rest of the group concern was the main response. Except for Luke who

little helped the baby to play (and was in Group A on this basis), the other children in Group B were reported to frequently do so. This ties in with their mothers' report, that it was easier for the mothers when the children and siblings were together. Finally, if an upset did occur between these children and their siblings, it was most often after a lengthy period of playing well together.

In conclusion, it would seem that ^{for} these two groups of children their relationship with their 8 months old siblings was related to some aspects of their initial reactions to the birth. Group A children who appeared little affected or else were markedly disturbed ('extremes') seemed to have 'less positive' relationships with their 8 month old siblings. Group B children, on the other hand, who reacted to the sibling's arrival by showing some regression, jealousy and/or imitating the baby, appeared to have 'good' relationships with their siblings at 8 months Post.

Table 9.2

At 2 weeks Post Interview "assessed" as follows:	Temperament-Stability before to after birth Low	In "strange situation" - before and after the birth		
		Stranger's entrance significantly disturbed locomotion (E2 vs. E3)	Alone with Stranger significantly disturbs locomotion (E2 vs. E4)	Separation significantly disturbs locomotion (E2 vs. E5)
<u>Did not take well to M's absence:</u>				
Louisa				
<u>Least disturbed by M's return:</u>				
Peter	Peter			
Simon				
Martin				
Philip				
<u>Never imitates baby:</u>				
Ian	Ian		Ian ¹	Ian ¹
Simon				
Martin	Martin			
Jimmy	Jimmy Caroline		Jimmy	
<u>No regression:</u>				
Ian				
Simon				
Martin				
Philip				
Sarah				
Peter				
Timothy				
Luke				
<u>'Accepted' baby:</u>				
Marian		Marian	Marian	Marian
Penny			Jane	
<u>Ambivalent about baby:</u>				
Ian				
Peter				
Timothy				
<u>Jealousy if baby held/fed: Interfere</u>	<u>least stability</u>			
Charity	Charity	Charity	Charity	
Peter	Peter			
Timothy	Timothy			
Marian	Morag		Morag Thomas	
<u>M does not cuddle baby in front of C</u>				
Ian				
Marian				
Simon				

1 = locomotion facilitated
 E = Episode
 E2 = Mother, Child
 E3 = Mother, Child, Stranger
 E4 = Child, Stranger
 E5 = Mother, Child

Standard Day Interview

<u>Children 'least included'</u>	<u>Children 'most included'</u>	<u>Children 'least disruptive'</u>	<u>Children 'most disruptive'</u>	<u>No 'baby' refs. by M or C at feed</u>	<u>Mother comments about baby's actions more than about child's actions at:</u>			
					<u>Feed</u>	<u>Sleep</u>	<u>3 mths. Post</u>	<u>6 mths. Post</u>
	Louisa							
Simon				Peter			Peter	Simon
Ian			Ian	Ian				
	Jimmy	Jimmy	Martin		Martin		Jimmy ² Caroline	Jimmy ²
Sarah		Timothy			Timothy	Timothy		Timothy
Marian		Marian			Luke ³ Marian ³		Marian ³	Marian ⁺³
	Charity	Jane	Charity					Jane
	Thomas		Thomas		Morag	Thomas		Morag Thomas

2 = Mother asks questions about baby's state more than about child's

3 = Comments about mother's own actions and intentions in relation to
the baby more than just own action or intention

+3 = as well as 3 (above)

Chapter 10Summary and General Discussion

My intention in this thesis was to study the effects of the birth of a second child on mother-first child relationships. To overcome the problems inherent in studying and assessing relationships, I chose to use a number of measures that are known to elicit specific aspects of the mother-child relationship. Concurrent with this approach, and the disagreements over methods and in what setting the mother-child relationship should be studied, I chose to combine several methods and both the laboratory and home settings.

The purpose of this chapter, is to bring together the various findings that have been presented in the separate chapters, and to end with an attempt at answering the questions that were posed in Chapter 1.

Information based on interviews indicated that almost all the children studied here were informed beforehand of the expected birth, and most were said to have been interested in the idea. The mothers prepared them for what to expect by talking about babies in general, looking at pictures, reading books and coming into contact with friends' babies. When the mothers went into hospital to have the babies, most children stayed in their own homes and were looked after by their fathers and other familiar people. When the mothers returned home with the new babies however, most children were

disturbed. These disturbances included becoming more tearful, clingy, attention-demanding, mild regression and jealousy. Other workers (e.g. Legg et al, 1974) have reported similar reactions. That the baby's presence more than the separation from mother caused these disturbances, obtains support firstly from studies which have shown that even when mothers deliver at home, firstborns are equally upset (e.g. Dunn, Kendrick and McNamee, 1981; Henchie, 1963). Secondly, most children were looked after by their fathers and the few fathers who continued to go to work over this period, were nevertheless with their children after work. Recalling that Schaeffer and Emerson (1964) found that by 18 months of age, 75 per cent of their sample were attached to their fathers (apart from mothers who were more often the "principal objects"), leads one to believe that mothers' absence was not as keenly felt by this group of children, the majority of whom were close to their fathers. Thirdly, most children studied here visited their mothers in hospital and as such it was not a total separation anyway. Apart from these negative behaviours, some positive ones which few workers appear to report (but see Dunn et al) were also mentioned. These centred mostly on interest in the baby, helping mother in care-taking, being affectionate to the baby and wanting to hold it.

With these changes taking place, particularly the 'negative' ones, one would expect large quantitative changes in mother and child behaviours from before to after the birth.

However, this study showed that such changes in discrete amounts vary little from before to after the birth. Thus the Standard Day Interview which revealed that the highest amount of care the children received from 1 month Pre to 2 and 8 months Post-sibling was at the Continuous level, showed no significant differences in the amount of care at this level, nor at the Concentrated and Available levels, between any two time periods. Single measures in the "strange situation" of Ainsworth and Wittig (1969), also showed no differences when similar episodes were compared from 2 months before to 4 months after the birth. For example, exploratory locomotion in Episode 2 was not significantly different from before to after the birth (see p. 108 for the other measures).

The few behaviours that did change, were from observations of mother-child interactions in the home. Unlike the Standard Day Interview, which does not take into account "the emotional qualities" and the nature of the verbal interchanges between mother and child (Cooper and McNeil, 1968), the interactions observed in the home, were designed to assess both these aspects. The quantitative changes that occurred from 3 months Pre to 3 and 6 months Post pertained more to mother than child behaviours. Their general direction was towards a reduction in positive involvement at 3 Post, compared to 3 Pre and 6 Post. For instance mothers talked about objects and events (Comment Object), praised their children's actions (Judgement +1; Judgement +2),

sought clarification and confirmation of what the children said (Request 3) and generally talked to them (total unit utterances), all these more at 3 Pre and 6 Post than at 3 Post. This difference in mother behaviours between 3 Pre and 6 Post compared to 3 Post was not found for the children's behaviours. It was mentioned earlier (p.232) that in general the results on quantitative differences obtained in this study, were not similar to those found by Dunn and Kendrick (1980a). In so far as there was a tendency towards a reduction in maternal 'positive' behaviours at 3 Post, it could be said there was a thread of resemblance in both our results, although the particular behaviours involved were different in the two studies. However, differences still exist. The increases in maternal prohibitions, in control episodes in conversation and in the time spent in confrontations found by Dunn and Kendrick, were not obtained here. That the post-birth period they covered (2-3 weeks), unlike the 3 months-post in this study, was thought not to have been the crucial difference, obtains support from my other studies that were done at comparable times. In the Edinburgh study, when I compared interaction during 'feed' and 'sleep' non-significant tendencies for mothers and children to Comment, Agree with each other, engage in fantasy (play) and look at each other were seen for 'feed' more than 'sleep'. Kendrick and Dunn (1980) on the other hand found significant increases in positive interaction (that is joint attention, mutual looking, mothers "extending"

comments on the child's action) when they compared 'feed' and not-with-baby contexts. Therefore the difference here may have been one of significance levels. However, in the same study, their other finding was of a significant increase in negative interaction more during feed than the not-with-baby context. This was not found in my own study. Moreover, the non-significant trends that I did find tended to occur more during sleep than feed. It appears therefore that the one difference that consistently emerges between our studies, and is evident from the two just mentioned, and to a smaller extent in the maternal reports from 2-weeks post birth, is the increase and/or expression of 'negative' behaviours more in their sample than mine. It is proposed therefore, that the one difference between our samples, the socio-economic background, probably contributed to our separate results.

It is of course, not the case that the middle-class background of the sample studied here insulated the mothers and children from the effects of the birth of the second child. Qualitative changes in mother-child interactions did occur, and the marked disruptions in age-related behaviours that occurred for both mothers and children show that the children were not as little affected as the lack of quantitative differences may imply. More of the qualitative changes were obtained for mothers rather than children, possibly because more mother than child behaviours lent themselves to this kind of analysis and therefore more

were done. Almost all of these changes or styles were observed at feed, sleep and/or 3 Post; by 6 Post they had returned to almost the 3 Pre level. Some of these were: at 3 Pre and 6 Post mothers got their children to do something by asking in the nicest possible way, e.g. "Perhaps you could shut the door" (Organise +1) rather than "Shut the door" (Organise +2). At feed, sleep (both 1 month post birth) and 3 Post this style was maintained but it was not significant. Another example, also observed at feed, sleep and 3 Post was that in stopping their children from doing something, mothers tended to issue firm orders, e.g. "Stop that noise" (Organise -2) rather than "Do you think you could stop that noise?" (Organise -1). At 3 Pre and 6 Post the reverse was true (Organise -1 > -2), but was significant only at 3 Pre. One style shown by the children, and which points to the disturbances that occurred at 3 Post deserves mention. At 3 Pre, feed, sleep and 6 Post there was a non-significant tendency for children to smile more than to cryfuss (cries + fuss), but only at 3 Post was the tendency towards cryfuss more than smile.

Apart from these qualitative changes, the marked disruptions that occurred in age-related behaviours have also been mentioned. These disruptions which occurred in mothers' behaviour to the children and vice-versa were particularly marked at 3 months Post. More of the disruptions in mother behaviours occurred after 3 months Pre. Thus in interacting with the older children, mothers briefly acknowledged what

the children said (Agree 1), disagreed with them and delayed complying (Comply 2) all at 3 months Pre, whereas at 1 month (feed and sleep) 3 and 6 months Post, these behaviours were not related to the children's age. In relation to the younger children at 3 Pre, mothers were more nurturant and also smiled at them more, but again at 1, 3 and 6 months Post these behaviours were not associated with age. A few behaviours were related to age either at 3 Pre, 1 or 6 months Post, or at more than one of these periods (e.g. Information 1 was positively related to age at 3 Pre, sleep and 6 Post), but no single mother behaviour was related to age at 3 months Post.

More child than mother behaviours were related to age at 1 month Post (feed and sleep). Further, some of these were differentially related in terms of significance level not direction, in the two contexts. Thus about half of the disruptions occurred after 1 month Post, and the other half after 3 months Pre; but as for the mother behaviours the disturbance was especially marked at 3 Post. For example, questions requiring factual information (Question 4) and number of categories used, both of which were positively related to age at 3 Pre and at both feed and sleep, had this association disrupted at 3 Post. For Question 4 however, the relation re-emerged at 6 months Post. Other behaviours, e.g. Comment object, Information 1 (direct answers to questions) and No Comply 1 which were marked in the older children, ceased to be related to age after 3 Pre.

Thus, before the birth mothers tended to behave differently with children of different ages, but after the birth this distinction was no longer apparent. For both mothers and children, these disruptions in age-related behaviours were especially marked at 3 months Post. That the 3 Post period was a particularly stressful one in the mother-child relationships is also supported by the findings from the temperamental assessment which showed that the children as a group became more active, more assertive and less malleable at this time.

The children's behaviour in the strange situation at 4 months Post also revealed the changed nature of the relationships with their mothers. In the pre-birth session, the children's security in the mother's presence was reflected in that they explored the strange room in the initial episode with her more than in any other episode. They also played with objects in mother's presence significantly more in all the three episodes during which she was present compared to when they were alone with the stranger. After the birth, their security in exploring the room was evident only in comparisons between episodes where they were alone with mother and alone with the stranger. The comfort in mother's presence and the discomfort when alone with the stranger were no longer apparent for play with objects. When the mother left the room in the pre-birth session, there was a strong tendency especially amongst children less than 2 years of age, to get upset. After the birth, there

was a significant absence of distress and this was attributed to age. When mother returned to the room in the pre-birth session, the children tended to show that they were pleased to see her back. After the birth, there was minimal response to her return, not only in terms of proximity seeking which would seem age-dependent, but in the absence of other 'positive' behaviours e.g. smiling and greeting from a distance.

The disappearance of the consistent between-episode patterns, particularly for locomotion and manipulation, it was argued was not due to the simple lack of stability in these behaviours from before to after the birth; neither was it due to familiarity with the "strange situation". The birth of the sibling on the other hand, was thought to have caused these disruptions. Support for this comes from a number of sources. Firstly, the pre-birth results obtained in this study for the between-episode comparisons are in agreement with the results that have been found by other workers, and these have been cited in Chapter 5. Secondly, measures that were significantly related to age in the pre-birth session had these relations disturbed in the post-birth session. For instance before the birth, exploratory locomotion significantly decreased with age in the two episodes during which the children were alone with their mothers (Episodes 2 and 5). After the birth, however, locomotion was not significantly related to age in either episode. Before the birth, manipulation of objects

occurred significantly more with age in the presence of the mother and stranger (Episode 3), when alone with the stranger (Episode 4) and on mother's return (Episode 5). After the birth, none of these significant relationships were maintained in any of these three episodes. For both locomotion and manipulation then, the trends of a reduction and an increase with age respectively were disrupted in the post-birth session. Further, in both these measures the disruptions occurred mainly in the older children, with the "least affected" age being around 25-30 months.

In the presence of the mother and the stranger in Episode 3 and before the birth, the older children tended to be nearer the stranger and further from the mother. After the birth this relationship was not found and the older children did not maintain distances from mother or stranger that were significantly different from those of the younger ones.

When alone with the stranger in Episode 4, and before the birth, older children more than younger ones looked at her, showed/gave her objects and were less physically distant from her. After the birth, none of the relationships were found.

That these disruptions occurred in the post-birth session is clear. Together with the disruptions that were found at 3 months Post (the ones just mentioned were at 4 months Post), it can be seen that this was not only a disturbed phase but that these disturbances occurred more in the older children.

The third source of support for the birth having caused the disruption in patterns obtained before the birth, comes from the regression data. In all cases, even where the age-correlations were not significant, the post-birth data either showed a reduction in a trend which was earlier established, or the emergence of new trends which were exactly in the same direction in all episodes.

Another feature that emerged from the regression data was that children of around 25-30 months at the births of their siblings appeared "least affected" in both sessions. That is, their behaviour in the pre- and post-birth sessions was similar. Now it may be recalled that this age range coincides with the median inter-birth interval between first and second borns for the period 1965-1977 (Britton, 1979); also with the "desired" interval (Dunnell, 1979); and popular belief (Busfield, 1974; Dr. Brown quoted by Jenny Glew in 'Woman', July, 1981). Perhaps children in this age range are so 'insecure' anyway that the birth of a sibling makes little difference. It certainly appears to be the age range when 'everything' happens - from the children using language to be assertive, increasing pressure on being successfully toilet-trained and all in all encapsulated in the phrase "the terrible two's".

Up to now a summary of the results that were found in the study have been presented. We will now turn our attention to the questions that were posed in Chapter 1, and an attempt to answer them in relation to the preceding summary will be made.

Question 1 - On the nature of the change (due to the sibling birth) in the first child, the mother and in the mother-first child relationship.

The birth of a sibling has been found to have a marked effect on mothers and first born children. The children's immediate reactions included both 'negative' and 'positive' behaviours. There were few quantitative changes in mother and child behaviours, and the maternal ones that did change were towards a reduction in positive behaviours at 3 months Post. Qualitative changes in mother-child interactions were found, and although some occurred during feed and sleep, more were found at 3 Post. That the 3 Post period was a particularly difficult one for mothers and children is supported by the age-relations that were disrupted at this time. At 4 months Post, the disturbance in the relationship was still evident, but by 6 months Post the 'balance' had been restored and their interactions were more like the patterns obtained at 3 Pre. *Dunn and Kendrick (1982) also reported that the first children were less difficult by 8 months Post, and that the dramatic increases in conflicts and confrontation between mothers and first children that were obtained after the birth did not continue over the following 14 months. On the basis of the study that was done here however, I am able to specify and suggest that by 6 months Post, the patterns of interaction were largely similar to those obtained 3 months before the birth.

Question 2 - On the age of the first child and hence the spacing between the first and the second.

It is not possible to say whether any of the changes that were reported by mothers at the Two-weeks post-birth interview were related to age, since this analysis was not done. However, Dunn, Kendrick and McNamee (1981) who used the same interview reported that the only age-related reaction to the birth that they found, was the tendency for younger children to become clingy.

Of the few mother behaviours that occurred either at 3 Pre or 6 Post, more than at 3 Post, more tended not to be related to the children's age (8 vs. 4). The two significant results (Comment self 2 and Joint activity) which occurred more during 'sleep' than 'feed' were also not related to the children's age. The child behaviours that changed in the comparisons between 3 Pre, 3 and 6 Post also tended not to be due to age (3 vs. 1). Of the two that occurred significantly more during 'feed' than 'sleep', the use of a greater number of categories was more attributable to the older children, whereas looking at mother was not related to age. The major finding to do with age, however, has got to be the disruptions in age correlations that occurred for both mother and child behaviours in the feed vs. sleep contexts, and more dramatically at 3 Post. These disturbances in correlations were also obtained at 4 months Post for child behaviours in the "strange situation", and in general the results showed that older children were acting

more like younger ones; that is, they were showing regressions. In this context those aged about 25-30 months at the sibling births appeared 'least affected', whereas older children tended to show more disturbance after the birth.

Question 3 - On the first child's temperament.

The children studied here could not be classified according to Thomas and Chess (1977) "easy", "difficult" and "slow-to-warm-up" temperamental patterns. This issue has already been discussed (see Chapter 4). What the results did show, was that the children as a group became more active, more assertive and less malleable at 3 Post compared to 1 Pre. Individually and in relation to the group, they showed a trend towards change and instability in behavioural styles from before to after the birth.

Question 4 - On the nature or quality of the mother-child relationship that existed before the sibling birth.

The immediate reactions to the birth, and the nature of the mother-child post-birth relationship may possibly be influenced by the kind of relationship that existed between mother and child before the birth. I am unable to give a decisive answer at this time, but it is my belief that further investigation involving the "patterning" and sequences within the mother-child interactions should provide

a definite answer to the question. *Dunn and Kendrick (1982) have reported information bearing on the question. They found an association between children who were described as frequently irritating and interfering toward the baby, and high levels of confrontation and prohibition between mothers and children pre-birth. In these families too, the high levels of conflict were still evident after the birth. Conversely, mothers who showed a high level of play with and attention to their children, maintained these relatively high levels from before to 14 months after the birth. Certainly, it seemed in my study that "extreme" children, who either appeared little affected by the birth of their sibling or else showed very marked disturbance, played little with their 8 month old siblings and indeed were often gleeful or not too bothered when their siblings were upset. Many of the children who had developed a "good" relationship with their sibling, had shown some initial regression, imitation of the baby or jealousy.

The results of this thesis including those outlined in this chapter do not appear to fit into any established theory of child development. Individual findings however can be related to aspects of some theories.

The disturbing effect of the birth on the first child and the mother-first child relationship has long been recognised in psychoanalytic theory, but as was mentioned in Chapter 1, detailed behavioural evidence has only recently become available. The findings in this thesis give support to the psychoanalytic viewpoint, but in addition to the negative and 'pathological' aspects of jealousy, regression and rivalry which psychoanalysis stresses, positive reactions in the first born involving interest in the baby and helping the mother with caretaking were also found in a fair proportion of the subjects. Further disturbances were not restricted to the child; there were also changes in the quality of the mother-child relationships and disruptions in age-related behaviours of the mothers to children and of the children

with the mothers were also reported here. Apparently this has not been studied in a systematic way previously.

That the disturbance in the mother-first child relationship appears to maximise around 2 to 4 months post-birth would seem to be related to the younger sibling's capabilities at this time and changes in the mother's relationship to the younger baby. Unlike neonates, infants of about 2 months of age are more wakeful and alert, they smile, coo and babble, are more 'tuned in' and responsive to their mothers. They demonstrate a state which Trevarthen (1979; 1982) has called "primary intersubjectivity". Mothers in turn have been found to interact differently with infants of this age, compared with the earlier period of neonatal "withdrawal" and to follow developments in the infants' capacity to direct attention more to exploring the environment (Sylvester-Bradley and Trevarthen, 1978). The 2 month stage therefore with its marked affective involvement between mother and sibling signals not only a point at which the sibling is responded to more like a person, but probably heralds for the first child the first real feelings of displacement by this now active competitor for the mother's attention. I suggest that this emergent relationship between mother and sibling is probably responsible for the 2 to 4 month period being a difficult time for mothers and first-born children.

That the mother-first child relationship appeared to return to the pre-birth pattern by 6 to 8 months after birth, is more difficult to explain. On the basis of the mother-sibling relationship proposed for 2 to 4 months after birth, one would expect the relationship between mother and first child to become increasingly stressful rather than the reverse. Perhaps, in the terms of Piaget, by 6 to 8 months, the first child has 'accommodated' to and assimilated the advent of the sibling, and has developed ways of coping with this 'object'. This

state of equilibrium within the older child, would in turn ease the relationship with the mother and give rise to a 'smooth' pattern in their relationship as before the new baby came.

An alternative way of explaining the disturbance in the mother-first child relationship after the birth of a sibling, derives from animal studies that have looked at the formation and waning of the attachment bond. In most mammals, the mother-young relationship follows a predictable series of stages (Schneirla, Rosenblatt and Tobach, 1963), in which the responsibility for maintaining contact gradually shifts from the mother to the young. These stages, which represent the 'typical' pattern in the absence of alarm and distress, have been variously labelled, but the terminology of Harlow, Harlow and Hansen (1963) for rhesus monkeys would appear to hold for other subhuman primates. These authors characterised these stages as involving (1) attachment and protection, (2) ambivalence and (3) separation and rejection. Our interest here is on stage 3, but it is necessary to note that the sequence of stages involves gradual transitions, secondly that there are marked species and individual differences and thirdly that each stage is characterised by changes in the behaviour of both mother and young. Stage 3 is preceded by a constellation of changes. The young are now considerably older, in baboons there is a change in coat colour (De Vore, 1963), motor coordination is improved, the young spend more time away and at greater distances from the mother, orienting more towards peers and social play, and generally the young become more independent of the mother (Kaufman and Rosenblum, 1969). Changes in the mother include a decline in her efforts to retrieve the now resistant infant, toleration of its growing excursions in time and space. The mother's behaviour is ambivalent, both facilitating and inhibiting contact.

Stage 3 which signals the termination of the close bond is marked by the end of lactation, weaning, maternal behaviours which discourage proximity and contact between mother and infant (e.g., nipple withdrawal, threat) and eventually rejection. This may be both physical and emotional as in langurs (Jay, 1963). If weaning coincides with the mother's resumption of the oestrus cycle and sexual activity, rejection is stronger (Goodall, 1973). In most subhuman primates by the time of the next birth, the close bond between mother and an older infant has ceased, although a relationship may continue in some form (eg., Goodall *ibid*).

In a very limited way therefore the disturbances in the mother-first child relationships that were obtained in this thesis, parallel the weakening of the mother-infant bond that occurs in subhuman primates upon the birth of a sibling. However, there are of course major differences.

Firstly, the behaviour of human mothers towards their children is unlikely to be governed in any simple way by physiological changes within themselves nor do they actively reject their older children who will not be capable of functioning independently for some years.

Secondly, on the basis that the young of subhuman primates orient more to peers and are more independent of mother at the birth of the sibling, we would predict that human children who have begun to form relationships with peers and other individuals apart from ^mother as they get older, should be less disturbed by the birth of a brother or sister. This prediction is of course contrary to the findings that were obtained here which indicated that older children were more disturbed by the birth than were younger ones. It is possible that these older children may have been advancing in other areas and relationships that were not assessed here.

Thirdly and most importantly, human children not only acquire language but the age range of the children studied here (18 - 50 months at the sibling birth) - includes children who could use language with considerable skill, for example in imaginative play, cooperative engagement and regulation of interactions with their mothers and other persons. In humans then, the change in the mother-child relationship is much more complex than it can be in subhumans.

The limitations inherent in assessing older children's attachments to their mothers in the "strange situation" of Ainsworth and Wittig (1969) were presented in Chapters 1 and 5. However in spite of these problems, the results did show that for the children as a group, the nature of their attachments changed from before to after the birth of the sibling. Classical attachment theory as originally put forward by Bowlby (1971) postulates that a child's attachment to mother grows less intense as measured by proximity-seeking and physical contact, but the theory does not address itself to the distal forms of contact which it is suggested come into play as children get older. Bowlby (1971) himself has postulated a fourth stage in the development of attachment, which he says occurs around the ages of 2 to 3 years, and involves a "goal corrected partnership". At this stage according to him the child begins to infer his mother's set goals and the plans she is adopting to achieve them, and the child fits his goals with hers. However not only is this stage least investigated (Ainsworth, 1973) but until attachment theory deals with the more mature behaviours that are shown by children about 2 - 3 years and older, particularly the use of language in the normal or 'optimal' relationship between a mother and child, the theory can not begin to explain the way in which attachments are transformed nor can it explain the accelerated 'detachments' that are obtained upon the birth of a sibling. As was suggested in the Introduction (Chapter 1), one of our first and most urgent tasks should be one of determining how different

kinds of mother-child interactions may give rise to different kinds of attachments.

The implications of the findings that were presented in this thesis are clear. Firstly, the changes in relationship between mother and child follows a specifiable time course with the effect of the sibling birth probably maximising at 2 - 4 months post-birth, and the relationship seeming to return to the pre-birth pattern at about 6 - 8 months post-birth. This seems to hold across considerable differences in the nature of the actual relationship itself. Furthermore, the clearest change in the individuals' (either mother or child) behaviour is that mothers at around 2 - months post-parturition become more demanding and controlling of the older sibling, or at least change the style they use when controlling their children's actions.

The second implication is that the age of the older child at his/her sibling's birth is critical in determining the degree to which the child will show an effect of that sibling's birth. Simply, the older the child is (beyond 30 months approximately) the greater is the regression produced. That this behavioural change is not directly measureable as an age-dependent change in any particular index is caused by the age trends already present in the data. Thus these regressive effects are shown by the reduction of the age trends in the data, at around the time of maximal effect that is 2 - 4 months post-birth - this is seen in both the mothers' behaviours to the children and vice versa in the home observations, and in particular the exploratory locomotion and manipulation measures in the Ainsworth procedure. These age trends, with their minima at around 30 months, coincide very nicely with the actual inter-birth interval data (Britton, 1979) and the "desired" inter-birth interval (Dunnell, 1999), found for samples of English and Welsh women for 1976. This relationship is a

very interesting one, not least in the causal direction of this presumed functional relationship. A very obvious next research strategy would be to investigate the relationship when the inter-birth interval is greatly different. This should enable us to sort out the chicken and egg nature of the causal relations between inter-birth interval and age when the sibling birth has minimal effect on the behaviour of the older child.

(See Additional References after main list)

Appendix 1 Names of subjects and their ages at birth
of sibling

<u>Main Sample</u>	<u>Interviews Only Group</u>
Simon 18.25 months	Roger 16.75 months
Penny 19.5 months	Mick 19.75 months
Jimmy 19.75 months	Alvin 20.5 months
Marian 20.75 months	Crispin 22 months
Ian 23 months	Alan 27.25 months
Sarah 23.75 months	Eileen 29.75 months
Peter 25.75 months	Clare 30 months
Morag 26.75 months	Lorna 31 months
Timothy 27.75 months	Richard 38.25 months
Jane 28.75 months	Elizabeth 38.75 months
Louisa 31.5 months	Sandra 39 months
Charity 34 months	Andrew 40 months
Luke 36.5 months	Melissa 45 months
Caroline 39 months	Nigel 49.5 months
Martin 42.25 months	Eleanor 60.5 months
Philip 44.75 months	
Thomas 50 months	

N = 17: 9 boys, 8 girls

N = 15: 8 boys, 7 girls

Frequencies of first and second child pairs by sex

<u>Sex of 1st</u>	<u>Sex of 2nd</u>	<u>Main Sample</u>	<u>Interviews Only</u>
Boy	Boy	4	5
Girl	Girl	3	2
Boy	Girl	5	3
Girl	Boy	5	5

Appendix 2Preparation of first-born children for the birth of the sibling

(From Pre-birth Interview)

1. Have you told X that you are expecting a baby?
When did you tell her/him? What/how did you tell her/him?
2. Is there anything you have done to prepare her/him for the arrival of the baby?
3. How did s(he) react to the news? Is s(he) interested in the idea of the baby?

Appendix 3Two-weeks post-birth interview

Name:

Date:

2nd Baby born:

Weight:

M F

Where:

Sex 0 1 ()

1. How was the labour and delivery? Any problems immediately after the birth?

If delivered in hospital

2. How long were you in hospital? () () days

3. Was X at home or with grandparents etc?

Looked after at home: Father

Mgm

Pgm

Friend

Babysitter

Other relative

Away from home:

With Father

Mgm

Pgm

Friend

Relative

Other

4. Did X visit you in hospital? How often? How do you think (s)he took your being away?

5. Was (s)he there when you returned home? If not, when did (s)he return, and where were you and the baby? How did (s)he react to your return?
6. How does X get on with the (new) baby? Is (s)he showing any interest?
7. How is the new baby? And how do you feel? How have the nights been?
8. How is feeding going? Breast or bottle? What is his/her weight now?
9. Does (s)he cry much? When does (s)he cry? For how long? Is (s)he awake much . . . When?
10. How about help? Have you had enough in the first few days? Now? Do you find the new baby easy to manage? Is there anyone you can get to help you out if you feel very down? Are you more exhausted now - or in the first days?
11. How do you think (s)he feels about the new baby? What has (s)he said?
12. Has (s)he shown any jealousy?
13. How does (s)he show it? When did it start? How do you handle it?

14. Do you think (s)he is pleased about the baby, or resents him?
15. Does (s)he try to copy the baby or want things done like the baby has? e.g. wear a nappy, be fed, have a bottle, etc.? Are there any things (s)he's gone back in that (s)he used not to do, but does now, or things (s)he used to be able to do and now needs help?
16. Does (s)he ask questions about the baby? What does (s)he say about the baby?
17. Does (s)he try to help you with the baby?
18. Can you think of anything that the arrival of the baby has stopped him doing - things (s)he used to enjoy, e.g. the time spent reading stories, bathing together, being taken out by M etc.
19. What does X usually do when you are feeding the baby?
N.B. 1. After this, and the following questions, ask "And how do you cope with that?" if applicable.
2. Note any measures taken to avoid problems, or to respond to child's anxiety.
3. Note where X is (in relation to M and b), if X has anything to do, and if alone.
20. What does X do when you are changing the baby?

21. What does X do when you are cuddling the baby?
22. What does X do when the baby is crying?
23. What does X do when the baby is asleep?
24. Can you leave X alone with the baby?
25. Do you think recently (s)he has wanted to become more grown up?
26. Does X ever still try to help you around the house - tidy with you, help with the cooking or cleaning?

Appendix 4 : Temperament Assessment

1. What happens during the first 5 minutes after X gets up in the morning?

2. How was (s)he this morning?

d - Generally happy and smiling when wakes up

e - Variable mood

f - Generally fussy and bad tempered

g - These feelings usually intense: virorous laughing or crying or smiling

h - Varied

i - Mildly expressed usually: a little fussy or smiling

3. What is X like when getting washed or dressed in the morning?

v d - Generally pleasant (smiles etc.) during dressing

w e - Varied

x f - Generally fussy during these times

a - While being dressed very active, squirming and wriggling away

b - Moves a bit

c - Generally fairly inactive while being dressed

4. How about the last 2 meals (s)he has had? How did (s)he behave?

(i) if playing when called for the meal?

v - comes within seconds

w - variable

x - usually difficult to persuade to give up activity

(ii) during meals?

a - instant squirming, getting up and down, frequent interruptions

- b - some moving around, intermediate
- c - generally sits quite still and gets on with eating
- (iii) if does not get what food (s)he wants or has requested
- p - keeps picking and will not eat what is offered
- q - variable
- r - may fuss briefly but soon gives up and takes what is offered

5. Play

- (i) Does X play much by himself/herself?
- (ii) How long will (s)he play by himself/herself?
- (iii) What if you leave the room?
- (iv) What is (s)he like playing with other children?
- (v) And with an adult?

- d - Play usually accompanied by laughing and shouting etc.
- e - Variable or intermediate
- f - Generally fussy during play
- g - Play is generally vigorous
- h - Intermediate
- i - Play is generally gentle
- a - Play activity involves much movement - running about, kicking, throwing using arms
- b - Intermediate
- c - Generally sits quietly while playing
- p - Can amuse self playing for 15 minutes or so at a time
- q - Amuses self for rather variable times
- r - Shows need for attention or new occupation after several minutes

6. If taken for a walk

- a - Very active, running to investigate things, takes tricycle, ball, etc.
- b - Intermediate
- c - Rather inactive, mostly in a push chair, likes to sit down, walking quietly beside parent most of the time
- d - Shows pleasure: smiling, laughing, chatty most of the time
- e - Intermediate
- f - Fusses a good deal
- g - Showing of pleasure or fussing is intense
- h - Intermediate
- i - Mildly expressed: little smiling or fussing

7. Watching a T.V. programme (s)he likes

- p - Watches for many minutes
- q - Variable
- r - Only watches for a short time (2-5 minutes) and then does something else

8. When playing with other children

A child about his/her size tries to take something from him/her:

- k - forcibly tries to take repossession
- l - upset but does little
- m - does not seem to mind

A child who is a bit smaller:

- k - forcibly tries to take repossession
- l - upset but does little
- m - does not seem to mind

A child who is a bit bigger:

k - forcibly tries to take repossession

l - upset but does little

m - does not seem to mind

9. He/she does not get something he/she thinks (s)he is entitled to

k - forcibly tries to get it

l - upset but does little

m - makes no demands

10. General activity during the day

a - Rarely sits still, always on the move

b - Intermediate

c - Generally placid, often sits for long periods doing something

11. What is (s)he like when (s)he meets someone (s)he does not know?

s - Initial reaction to approach by stranger positively friendly

t - Variable

u - Initial rejection, withdrawal

12. Or goes to a new place or experiences a new situation with someone he/she knows well?

s - Initial reaction positive, curious, exploratory

t - Variable

u - Initial rejection, withdrawal

13. Doorbell rings and (s)he doesn't know who is there

s - Goes to the door

t - Stays put

u - Seeks refuge - runs away or seeks mother

14. In a new place or situation, e.g. change of bed or bedroom
a move or a visits - Initial reaction - acceptance; tolerates or enjoys them
within a few minutes

t - Variable

u - Initial reaction - rejection, does not tolerate within a
few minutesd - General reaction to familiar people is friendly - smiles,
laughs

e - Variable

f - Generally solemn - little smiling

15. What about the last time (s)he had a bath or had her/his
hair washed

a - In bath generally kicks, splashes, etc. throughout

b - Intermediate, moves a moderate amount

c - Moves little, sits quietly in the bath

v - Accepts having hair washed

w - Variable

x - Objects to having hair washed

16. If (s)he is ill, or has a bad cold

x - Much crying and fussing

w - Variable

v - Not much crying with illness - occasionally complains,
generally his/her normal self

17. During procedure such as nail cutting, hair brushing

- d - Generally pleasant
- e - Neutral or variable
- f - Generally fussing during the procedure

18. Use of lavatory away from home

- v - Happy to use it
- w - Variable
- x - Apprehensive or difficult

19. With a change in time, place or state of health

- v - Adjusts easily and sleeps well within 1 - 2 days
- w - Variable pattern
- x - Bothered easily, considerably. Takes at least 3 days to adjust sleeping routine

20. What about getting him to do things - things he can undoubtedly do for himself?

- p - Will do this if encouraged by mother, usually
- q - Varies
- r - Not co-operative; usually wants mother to do it

21. If attempting to do something difficult e.g. buttons, buckles

- p - Perseveres for 2 minutes or more
- q - Varies
- r - Stops trying in less than half a minute

22. When reprimanded by parent and asked to say sorry

- m - will do so readily
- l - Variable
- k - Usually refuses to say 'sorry'

23. Can you describe the last two occasions on which you told him or her off, told him/her to stop doing something

(i)

(ii)

k x - Defiant - continued or increased activity

l w - Variable

m v - Compliant

g - Upset and showed strong feelings (defiance or crying)

h - Intermediate

i - Little reaction

Activity a. b. c.

Mood d. e. f.

Intensity g. h. i.

Assertiveness k. l. m.

Persistence p. q. r.

Approach/Withdrawal s. t. u.

Malleability v. w. x.

Appendix 5a Categories that did not yield quantitative
significant differences, from 3 months Pre to
6 months Post sibling birth: Mothers

Show 1	Question 4	Comply 2
Attention-seeking	Question 5	No Comply 1
Comment Self 2	Information 1	No Comply 2
Comment Other 2	Information 2	Judgement -1
Agree 1	Organise +1	Judgement -2
Agree 2	Organise +2	Nurturance
Disagree 1	Organise -1	Mother looks child
Question 1	Organise -2	Joint activity
Question 2	Comply 1	

Categories that did not yield quantitative
significant differences, from 3 months Pre
to 6 months Post sibling birth: Children

Total unit utterances	Question 2	No Comply 2
No. categories used	Question 4	Play (fantasy)
Name	Question 5	Play (objects)
Show 1	Information 1	Cries
Attention-seeking	Request 2	Fuss
Comment Other 1	Request 3	(Cries + Fuss)
Comment Object	Organise +1	Distance
Agree 1	Organise +2	Smile
Agree 2	Comply 1	Child looks
Disagree 1	No Comply 1	Mother

Appendix 5b Mother behaviours that were not significantly
correlated with children's age at 3 months Pre,
3 months Post and 6 months Post

Total unit utterances	Question 2	No Comply 2
No. categories used	Question 3	Judgement +1
Show 1	Question 4	Judgement +2
Attention-seek	Information 2	Judgement -1
Comment Self 2	Organise +1	Judgement -2
Comment Other 1	Organise +2	Play (fantasy)
Comment Other 2	Organise -1	Mother looks child
Comment Object	Organise -2	Joint Activity
Question 1	Comply 1	

Child behaviours that were not significantly
correlated with the children's age at 3 months
Pre, 3 months Post and 6 months Post

Total unit utterances	Comment Other 2	Play (objects)
Show 1	Agree 2	Cries
Attention-seek	Request 1	Fuss
Comment Self 2	Request 2	Distance
Comment Other 1	Comply 1	Child looks Mother

Appendix 5c Skittles - Categories that did not yield quantitative significant differences between 3 Pre and 6 Post: Mothers

Total unit utterances	Question 3	Comply 1
No. categories used	Question 4	Judgement +1
Exclamation	Question 5	Judgement +2
Demonstrate	Information 1	Judgement -1
Attention-seek	Information 2	Judgement -2
Comment Self 2	Information 3	Claim 1
Comment Other 2		Claim 2
Comment both 2	Organise +1	Nurturance
Agree 1	Organise +2	Smile
Agree 2	Organise -1	Physical Control
Question 2	Organise -2	

Skittles - Categories that did not yield quantitative significant differences between 3 Pre and 6 Post: Children

Total unit utterances	Information 1	No Comply 1
Exclamation	Repeat	Claim 1
Attention-seek	Organise +1	Claim 2
Agree 1	Organise +2	Smile
Agree 2	Comply 1	

Mother behaviours that were not significantly correlated with children's ages at 3 Pre and 6 Post

Total unit utterances	Question 2	Comply 1
No. categories used	Question 4	Judgement +1
Exclamation	Question 5	Judgement +2
Demonstrate	Information 2	Judgement -2
Attention-seek	Information 3	Claim 1
Comment Self 2	Organise +1	Nurturance
Comment Both 2	Organise -1	Smile
Agree 1	Organise -2	Physical Control
Agree 2		

Child behaviours that were not significantly correlated with children's ages at 3 Pre and 6 Post

Total unit utterances	Agree 2
Attention-seek	Organise +2
Comment Other 2	

Appendix 6Eight-months Post-birth Interview

1. How easy is he/she now compared with the first few weeks?
- 2.a How have the months in between been?
 - b What did you find the most difficult time?
3. Have you had any problems over feeding?
4. Have you had any problems over sleeping?
5. Is he/she very demanding of attention? Do you find you can get on with your jobs? How does he/she compare with his/her elder brother/sister at this age?
6. Is he/she interested in having his/her brother/sister around? Is it easier for you when they are together - or are there problems?
7. How mobile is the baby? Does he/she interfere with X's games?

If "Yes":
What does X do if the baby interferes with what he/she is doing?
8. What do you do if this happens - if baby interferes with X's games?

9. What does X do if he sees the baby doing something naughty? e.g. pulling things out of a cupboard, playing with things he/she shouldn't touch.
10. What does X do if he sees the baby in danger?
e.g. putting things in mouth
playing with fire
position where he/she might fall
11. How does X behave if the baby is upset? Do you think sometimes that he/she enjoys seeing the baby upset? Does he/she ever persecute the baby to the point of upsetting him/her? Or take things away from the baby and upset him/her?
12. Are there things which X tries to do which seem to be kind but end up upsetting the baby? e.g., a cuddle that is too tight? or continuing a game when it is obviously upsetting the baby?
13. Does X help the baby to play?
14. What happens if you leave them alone - if you go off to another room? How long can they play without an upset?
15. When you are playing with the baby, what does X usually do?

Third Interview - Father

16. Has the amount your husband sees of X changed since the arrival of the baby?
What about soon after the birth?
Is he interested in the baby?
17. Do you think that X has become more/less keen on his/her father since the baby was born?
18. Does he/she mind particularly if his/her father plays with the baby?
19. Do you think that X growing up has made a difference to how much his/her father plays with him/her? Does things with him/her?
20. Has having two children meant that your husband does more in the house - or is it much as before?
21. When your husband is playing with the baby, what does X usually do?

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